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USER'S GUIDE TO 1986 CENSUS DATA ON MOBILITY

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USER'S GUIDE TO 1986 CENSUS DATA ON MOBILITY

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I. INTRODUCTION

The purpose of this document is to provide information on various aspects of mobility status data. It provides a review of the question, concepts and definitions, along with a discussion of limitations inherent in the measurement of five-year mobility and migration in the Censuses of Canada. Some background is provided on the processing of mobility data, from collection through to retrieval. The historical comparability of mobility and migration data from 1961 through to 1986 is examined in terms of conceptual and processing changes. An analysis of the quality of 1986 data is presented in two sections, one concerning data quality at the national and provincial level, the other at the small area level, particularly for Census Subdivisions.

Data on mobility and migration are considered fairly reliable at the national and provincial level. However, caution is recommended when using data at the small area level. Problems were identified particularly concerning the reliability of data on out-migration at the Census Subdivision level.

Prior to this document, a comprehensive study entitled "A User's Guide to 1976 Census Data on Mobility Status" (H.A. Puderer, 1980) was published. There was no guide prepared for the 1981 Census. To some extent, therefore, this guide provides some comparisons with 1981 and earlier censuses in an effort to provide continuity to users of both current and previous mobility and migration data. Further information on mobility status data can be obtained by contacting Demography Division staff.

II. MOBILITY STATUS QUESTION AND GUIDE INSTRUCTION

This user's guide refers to the mobility question on "place of residence 5 years ago" asked in the 1986 Census as well as in previous Censuses of Canada. The version of the question asked in the 1961, 1971, 1976, 1981 and 1986 Census questionnaires is presented in Appendix A. This question has always been asked on a sample basis, with a sample of 33.3% of households for 1971 and 1976, and 20% for the other years 1961, 1981 and 1986. From 1971 on, the question appears on the long form, or 2B questionnaire.

Starting with the 1971 Census, self-enumeration was introduced. In 1961 census data were collected using canvassers - that is, answers were recorded by the enumerator in personal interviews.[1] For self-enumeration, respondents were provided with guidelines for answering the questions. Guidelines for answering the questions on mobility as given in 'Instruction Booklets' for 1971 and 1976, and in 'Census Guides' for 1981 and 1986, are also provided in Appendix A.

In terms of both concept and format, the question has varied little over these past censuses. Differences are due mainly to wording and instruction changes. However, additional questions were asked in two censuses: in 1961, a question was asked on whether or not one's residence 5 years ago was on a farm; and, in 1971, a second question was asked on the number of moves made during the 5-year period.

Prior to 1961, mobility data were collected in the 1941 Census of Canada and the 1946 Census of the Prairie Provinces. In the latter case, the data related to a 5-year migration interval, whereas in 1941, the data were based on measures of continuous and last permanent residence.

A discussion of the historical comparability of mobility data is provided in Section VI.

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[1]In 1961, information for all questions, except income were reported by canvassers. In the case of income, respondents filled out the question later on their own. The mobility question, as well as some other questions, were included on the same questionnaire as income, Form 4.

III. MOBILITY STATUS CONCEPTS AND DEFINITIONS

The following presents the concepts and definitions of mobility status and the relationship between the 1986 Census mobility status question and the mobility status conceptual framework.

Mobility Status - Place of Residence 5 Years Ago

Mobility status refers to the relationship between a person's place of residence on Census Day and his/her usual place of residence five years earlier. On the basis of this relationship, the population is classified as non-movers and movers (mobility status). Within the category movers, a further distinction is made between non-migrants and migrants (migration status). Migrants are classified as either internal or external migrants.

The 1986 Mobility Status Question

The 1986 Census of Population residential mobility question had two parts. The first part was "self-coded", while the second part required a "write-in" response.

Response to the self-coded part of the question was made by checking the circle opposite the appropriate reply. Provision was made for four possible replies:

i) This dwelling;

ii) Different dwelling in this city, town, village, township, municipality or Indian reserve;

iii) Outside Canada;

iv) Different city, town, village, township, other municipality or Indian reserve in Canada.

On the basis of the self-coded responses, the respondents were classified as i) non-movers/movers, ii) non-migrants/migrants, iii) external migrants, and iv) internal migrants.

Response to the write-in part of the question was required only when the self-coded response was "different city, town, village, township, municipality or Indian reserve". Via the write-in entry, respondents were asked to identify their place of residence in Canada five years ago, giving the city, town, village, township, municipality, or Indian reserve, the county and the province or territory.

The write-in responses provided by internal migrants were used to provide origin-destination data for census subdivisions (CSDs) or aggregations of CSDs.

Based on the above response categories, the mobility status definitions are as follows:

Non-movers are persons who, on Census Day, were living in the same dwelling they occupied five years earlier.

Movers are persons who, on Census Day, were living in a different dwelling than the one they occupied five years earlier.

Non-migrants are movers who, on Census Day, were living within the same census subdivision (CSD) they resided in five years earlier.

Migrants are movers who, on Census day, were residing in a different CSD within Canada five years earlier (internal migrants) or who were living outside Canada five years earlier (external migrants).

With respect to external migration, immigrants - persons who were residing outside Canada five years earlier but in Canada on Census Day - are counted. (This is not to be confused with "landed immigrants", since persons residing outside Canada can include returning Canadians, as well as 'immigrants'.) Emigrants - persons residing in Canada five years ago but not on Census Day - are not counted.

With respect to internal migration, different types of migration are derived based on various aggregations of CSDs. Census subdivision aggregations commonly used include Census Divisions (CDs), Provinces (including the Territories), Census Metropolitan Areas (CMAs) and Census Agglomerations (CAs) showing in-migration, out-migration, net internal migration and migration streams.

In-migration is defined as a movement into a CSD (or CSD aggregation) from elsewhere in Canada, relative to the five-year interval. Persons who made such a move are called in-migrants.

Out-migration is defined as a movement out of a CSD (or CSD aggregation) to elsewhere in Canada, relative to the five-year interval. Persons who made such a move are called out-migrants.

Net internal migration refers to the number of in-migrants into a CSD (or CSD aggregation) minus the number of out-migrants from a CSD (or CSD aggregation) relative to the five-year interval.

Interprovincial migration refers to movements from one province or territory to another involving a change of residence. An interprovincial migrant is a person who, in the five-year migration interval, takes up residence in another province or territory. Such a person is an out-migrant with reference to province or territory of origin, and an in-migrant with reference to province or territory of destination.

Net interprovincial migration refers to the number of in-migrants into a province or territory minus the number of out-migrants from the same area relative to the five-year interval.

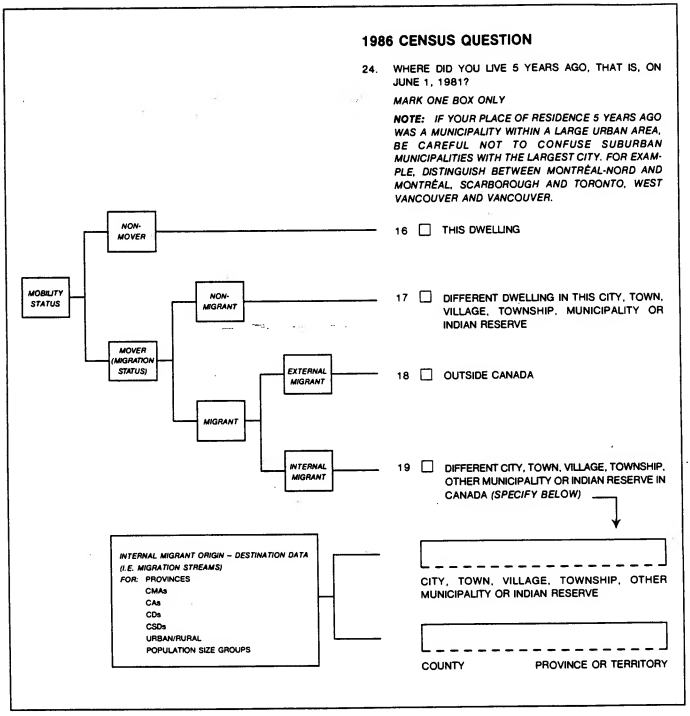
Migration stream refers to the total number of migrations made during the five-year migration interval which have a common area of origin and a common destination.

When tabulating usual place of residence 5 years ago by current place of residence, all geographic areas reflect their 1986 boundaries, even when referred to as places of residence in 1981. This applies to all geostatistical areas that are subject to boundary changes between censuses (e.g., census metropolitan areas, census divisions, census subdivisions).

Mobility status is reported for the population 5 years of age and over residing in Canada, excluding institutional residents.

The reader is directed to Figure 1 on the following page where the relationship between the 1986 Census of Population mobility status question and the mobility status conceptual framework is illustrated.

Figure 1. Relationship Between the 1986 Mobility Status Conceptual Framework and the 1986 Census Question for Mobility Status



Source: Reproduced from: 1986 Census of Canada Dictionary, Catalogue 99-101E, Statistics Canada, January 1987

IV. LIMITATIONS OF MOBILITY STATUS CONCEPTS AND MEASUREMENTS

1. Space and Time Dimensions

In order to provide a measure of migration, a conceptual framework and operational definitions must be established. No single approach is correct and there are advantages and disadvantages of any approach. Census mobility status rests on the concepts of 'change of residence' and 'inter-community movement' associated with movers and migrants, respectively. A change in social milieu (i.e., a change in community ties and life conditions) is used as the basis for distinguishing between migrating and non-migrating moves. Inter-community movements are migratory while intra-community movements are non-migratory.

Change of residence is operationalized as 'living in a different dwelling' (five years ago) and 'inter-community movement' is operationalized as 'living in a different CSD' (five years ago). The CSD was chosen as the basis for defining migration status since it provides a reasonable measurement of inter-community movement.

With respect to the time dimension, census mobility status is based on a comparison of residence at two fixed points in time. An interval of fixed length, in this case 5 years, is used. (Indefinite intervals, such as last previous place of residence or lifetime mobility lack a specific time reference). The 5-year interval is generally acknowledged as a good length of time since it coincides with the intercensal period, thereby providing a measure of migration as a component of growth. With longer periods, both respondent recall and response would probably decline. (For further discussion the user is referred to United Nations Manual VI, Methods of Measuring Internal Migration, and as well to the 1976 User's Guide).

There are some limitations associated with the use of the CSD as a migration defining unit and of the five-year migration interval that users should be aware of.

2. Limitations Associated with the Use of the CSD as the Migration Defining Unit

A number of such limitations were enumerated in the 1976 User's Guide. The following is a brief summary of these problems.

Movement between CSDs is intended to serve as a proxy for 'inter-community movement'. However, there will be a proportion of short inter-CSD moves which may involve less of a change in the social milieu of the mover, compared to some lengthy intra-CSD moves. Of course, this problem is not unique to the use of CSDs, since any choice of community boundaries will lead to similar problems.

A second problem is the variation in CSDs by size, shape and length of border. This poses limitations in the comparative analysis of migration within Canada, as well as with other countries. To some extent, the volume of migration is a function of the size of the CSD.

An additional consideration in relation period to the problem of variation in CSD size is the variation in the number of CSDs, say within regions/provinces and over time. Volume of migration is also a function of the number of CSDs, and hence is a limitation that should be considered in any comparative analysis among regions, and across censuses. Historical analysis is also affected by variation in CSD size and border. Discussion on the historical comparability of migration data in relation to CSD variation is presented in Section VI.

A third major limitation with the use of the CSD as a migration defining unit is respondent error. The bias usually occurs in CMAs when respondents tend to identify the CMA itself as the previous place of residence instead of the actual CSD within the CMA. For this reason, caution should be used in any detailed analysis of intra-CMA/CA migration patterns. A detailed discussion of small area (CSD level) data quality problems is provided in Section VII.

3. Limitations Associated with the Use of the Five-Year Migration Interval

The limitations of a five-year reference period have been well documented (for details see Puderer, pp. 33-35). As a consequence of the five-year period, certain moves are precluded.

Multiple moves are not captured, only the net effect of these moves. This can impact on migration data in a number of ways. Return moves and migrants are not counted: those who moved during the five-year period but returned by the end to either their previous dwelling or CSD of residence will be classified as non-movers or non-migrants respectively. A mover, non-migrant who moved from Ottawa to Toronto and back to Ottawa but to a different residence is indistinguishable from the mover, non-migrant who changed dwellings within the Ottawa CSD.

Similarly, origin-destination flows can be affected by multiple moves. The person who moved from Quebec to Ontario to British Columbia is not discernable from the one who moved from Quebec to British Columbia over the five-year period.

Another major consideration is that only the moves and migrations of those who are still alive at the end of the five-year period are counted. Moves of those who died before enumeration are not counted.

Those under 5 years of age are precluded from the mobility status universe and, of course, their moves are not counted.

Finally, users should remember that the characteristics of movers and migrants are measured at the time of enumeration, not at the time of moving. Thus, in most analyses of mobility status by various demographic, social and economic characteristics, this limitation should be considered.

V. 1986 CENSUS FIELD OPERATIONS AND PROCESSING

A. Field Operations

1. Coverage

Mobility data are reported for population 5 years and over, excluding institutional residents and those temporarily residing overseas. However, data from the mobility question on the 1986 questionnaire were collected for persons 15 years of age and over who were residing in Canada at the time of the Census. For persons 5-14 years of age, mobility data were imputed on the basis of information reported for other family members.

The 1986 Census mobility question was included on the 2B, or long, questionnaire which was used to enumerate one in five households in Canada.

The 2A, or short, questionnaire was used to enumerate 4/5 of all private households.

Almost all (99%) of the target population in the 1986 Census was enumerated using self-enumeration (as in 1981). The canvasser method was used for less than 2% of the population, mainly in remote northern areas and on Indian reserves.

2. Field Processing

If certain information was missing or unclear on the mobility question, it was mandatory that enumerators contact respondents. This follow-up was done first by telephone. If enumerators could not obtain the required information, a field follow-up was done. (Not all questions required mandatory follow-up but if more than 5 non-mandatory questions failed edit, a follow-up was required).

In the case of mobility, the question could fail edit, and hence require follow-up, for the following reasons: non-response; multiple response - more than one answer category checked off and no write-in; invalid response (e.g. illegible write-in); and, incomplete or partial response. In the latter situation, a written response for 'different city, town, village, etc.' was considered to be incomplete if the name of either the municipality or province was not provided.

The Edit Sample Study of the 1986 Census indicated, prior to follow-up that: the rate of non-response for mobility was 7.1%; multiple response 2.3%; invalid 0.6%; and, partial 0.1%. Follow-up reduced response problems but it is not possible to directly measure the extent of the reduction. However, calculations based on the answer categories of unedited responses (prior to Edit and Imputation) indicated that the rate of non-response (i.e. no answer category checked) was 4.4% and that of invalid multiples (i.e. more than one answer category checked) was 0.2%. No direct measure of partials (e.g. answer category checked, but no write-in) was available.

B. Regional Office Processing (ROP)

Respondents' written answers for 'different city ... ' (e.g. name of city, county and province) were converted to numeric codes as part of regional office processing. Special instructions were provided to coders to deal with incomplete answers, duplicate place names and other problem cases, such as the reporting of provincial electoral districts instead of census divisions in Quebec.

C. Direct Data Entry (DDE)

All questionnaire responses, including numeric codes for mobility were keyed into a computer. Write-in responses for mobility were not keyed in since they were already converted to numeric codes during regional office processing.

D. Head Office Processing (HOP)

Mobility data were not manipulated in head office processing. This stage of processing entailed receipt, analysis and special processing of data. Each Enumeration Area (EA) undergoes a series of structural edits and checks for inconsistencies. Special enumeration returns for Canadians overseas, temporary residents and merchant/navy ships are processed. Also included are coverage studies such as Reverse Record Check (RRC), Vacancy Check (VC) and Post-Enumeration Surveys (PES).

E. Edit and Imputation (E&I)

Edit and imputation for mobility status involved performing two specific tasks: the detection and correction for missing, incomplete or inconsistent responses; and the assignment of mobility status to the population in the age group 5-14.

Mobility data were screened for errors, such as illogical entries, multiple responses and incomplete or non-response. These 'errors' could be made either by respondents, or in the course of coding and processing (e.g. incorrect keying of codes during DDE). Values for missing, incomplete or inconsistent responses were imputed for 6.8% of responses including the 4.6% which were identified as missing or incomplete prior to E&I. Data for the population aged 5-14 were imputed on the basis of other family members.

Two major types of imputation were used: deterministic where errors and/or missing/partial responses were inferred from other questionnaire answers; and probabilistic, which selects a 'donor' record according to a number of characteristics that are similar to those for the record requiring imputation. This latter type of assignment is also known as 'hot-deck' imputation. The automated system used to handle edit and imputation of mobility data is 'SPIDER' (System for Processing Instructions from Directly Entered Requirements).

A number of consistency checks, corrections and various imputations are performed during the course of E&I. As a first step, the E&I process identifies the answers of each

respondent according to whether or not they are valid or complete. Check-off boxes are compared to identify single, blank and invalid (multiple) responses. Codes of write-ins (which were coded during ROP) are also analyzed to determine whether or not the code is valid, which parts of the code are valid, and those parts which will require imputation. For example, the respondent may have indicated only the province of residence five years ago, not the municipality; therefore, the missing part - municipality - will require imputation.

In addition to these checks, the 'universe' of respondents was also reviewed - any overseas or institutional respondents are screened out of edits. Any responses of the population aged 5 to 14 are retained, even though the question was limited to the population aged 15 and over.

Edit rules for within-person conflicts for mobility are applied to the population aged 5 and over. All possible combinations of responses are checked to see whether or not responses are conflict- free. If conflicts are detected, then corrective action is requested. For example, a within-person conflict could arise if a respondent had indicated that he or she had lived in a different CSD five years ago, yet the provided CSD of residence 5 years ago was the same as the respondent's current CSD of residence. This inconsistency would be corrected such that the respondent would be assigned the mobility status of 'same CSD' instead of 'different CSD' as originally indicated. This type of imputation is deterministic. In the case of responses where only part of the place name is valid (for example, province only) then the valid part is retained and only the missing or invalid part (for example, municipality) is imputed from a donor record. Imputation of mobility status and/or place of residence 5 years ago, is based on a 'clean' donor or record, one that has been edited and, where necessary, imputed. The 'donor' or imputor is usually a member of the same census or economic family as the 'imputee'. The priority list for donor selection is as follows: (i) the census family reference person; (ii) any other member of the census family; (iii) the economic family reference person; and (iv) any other member of the economic family. If family-based imputation is not possible (e.g. lone-person household) then another form of probabilistic imputation is used, known as a 'hot-deck' search. This involves finding a 'donor' with a similar set of characteristics (age, sex, marital status, aboriginal residence (on/off reserve) and mother tongue), based on 2,000 records or one census division, whichever limit is reached first. The most appropriate donor is determined through a series of weights reflecting the best match of variables between donor and the record to be imputed.

Certification of mobility data showed that the change in distribution of conflict-free records before and after imputation was not significant. Both the unedited and edited distribution of the mobility status variable yielded similar results, with the same variations in mobility by age groups and provinces/territories. Differences are small, with a slightly higher proportion of migrants in the edited distribution; 17.5% of the population aged 15+ were migrants, compared to 15.8% of the unedited, non-blank, conflict-free records. Corresponding to this slight increase, there were slight decreases in non-movers and non-migrants (see Table 1).

Table 1. Mobility Status Distributions, Unedited and Edited, 1986 Census

Mobility Status	Unedited, Including Blanks and Inconsistencies %	Unedited, Without Blanks and Inconsistencies %	Edited (after E&I) %
Same Dwelling (Non-movers)	55.1	57.8	56.3
Same CSD (Non-migrants)	23.3	24.4	24.2
Different CSD within Canada (Internal migrants)	15.1	15.8	17.5
Outside Canada (External Migrants)	1.9	2.0	2.0
Blanks and Inconsistencies	4.6	-	N/A
	100.0	100.0	100.0

Source: "Certification for 1986 Census Mobility Status Data: Summary Report", by M.J. Norris and M. Whalen. Unpublished document, Demography Division, February 1988.

F. Retrieval of Mobility Variables

Upon completion of E&I, including 2B weighting, the retrieval data base is loaded in a phase known as Retrieval Data Base Creation. Twelve mobility variables are available from the retrieval data base. Some of these variables were derived during E&I and copied to the retrieval data base (such as mobility status, area of residence 5 years ago (e.g. province of residence 5 years ago)) while those pertaining to current place of residence are created directly on the base during "post-E&I variable derivation". The twelve variables are:

1) MOB5 - mobility status variable which classified the population either as a mover/non-mover, migrant/non-migrant, external migrant or internal migrant;

2) PR5 - province of residence 5 years ago;

3) PR - current province of residence;

4) PCD5 - census division of residence 5 years ago;

5) PCD - current census division of residence;

6) PCSD5 - census subdivision of residence 5 years ago;

7) PCSD - current census subdivision of residence;

8) CMA5 - census metropolitan area or census agglomeration of residence 5 years ago;

9) CMA - current census metropolitan area or census agglomeration of residence;

10) POP5 - population size group of residence 5 years ago;

11) POP - population size group of current place of residence;

12) RUUB5 - Rural-urban classification of the place of residence 5 years ago.

More complete definitions of these variables can be found in Appendix B.

These variables facilitate the production of origin- destination matrices and various measures of migration.

The variable for rural/urban place of residence 5 years ago (RUUB5) requires special attention, due to its method of derivation, particularly in the case of migrants whose previous place of residence was a mixed rural/urban census subdivision. The values for RUUB5 are not directly available from the mobility question. They are derived indirectly for all respondents (except migrants from outside Canada) on the basis of the current rural/urban composition of CSDs. For internal migrants (i.e., those who lived in a different CSD 5 years ago) rural or urban place of residence is assigned proportionately on the basis of the current 1986 ratio of urban to rural population of the CSD they resided in 5 years ago. The non-migrant population is assigned RUUB5 according to the current census subdivision of residence. If a current or previous census subdivision (PCSD, PCSD5) has only an urban or rural population component, then the derivation of RUUB5 is straightforward.

VI. HISTORICAL COMPARABILITY

In the previous 1976 User's Guide on Mobility Data, a detailed discussion was provided on the historical comparability of the mobility status question from 1941 to 1976. While the current discussion highlights some of the main points of this previous review, it focuses mainly on the comparability of 1986 with the 1976 and 1981 censuses. Both conceptual and collection/processing changes affecting the historical comparability of mobility data are examined.

A. Conceptual Changes

Conceptually, the mobility status question has not differed significantly since the 1946 Census of the Prairie Provinces. For the Censuses of Canada, the question has been comparable from 1961 on. For all censuses from 1946 on, the mobility status question has been based on a five-year reference interval and CSD of residence. In 1941, respondents were asked the number of years of continuous residence in the same municipality and in the same province, and to state the province or country of last permanent residence. According to the 1976 Guide,... "the most comparable component of the 1941 migration data to that of succeeding censuses is the interprovincial/international migrants whose duration of residence with the province of enumeration was four years or less". (Puderer, p. 38).[2]

A comparison of the mobility status of the Canadian population (5 years of age and over) between the 1981 and 1986 census is provided in Figure 2. Mobility status based on previous censuses, from 1941 to 1976, is compared in Figure 3. This latter comparison which is reproduced from the 1976 User's Guide, shows the comparison of earlier censuses in terms of the 1976 publication structure. From 1976 on, the primary classification of the population was made on the basis of mobility status (movers, non-movers) while in some of the earlier censuses, the primary classification was based on migration status (migrants, non-migrants). These two sets of comparisons illustrate the conceptual comparability of the mobility variable across censuses.

Although the basic concept of the mobility variable has not changed significantly among the censuses, there have been changes in related factors which users should be aware of when analyzing mobility data.

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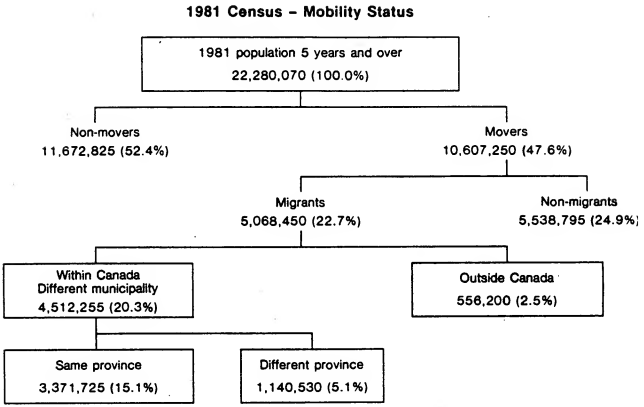
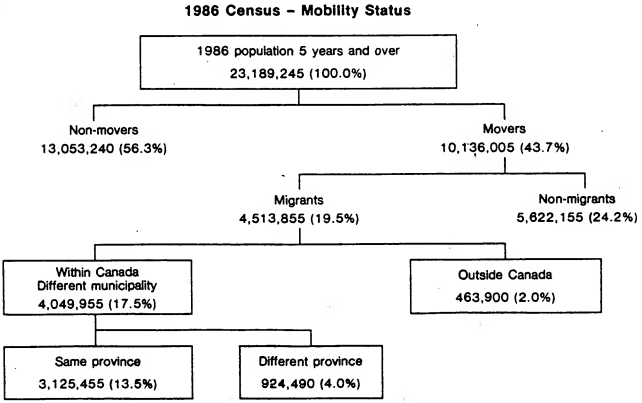
[2]In this early census, migrants were restricted to those who were resident outside their province of birth, on June 1, 1941, because problems encountered in respondents' understanding of the expression 'municipality' rendered it inadvisable to use migration data at the municipal level.

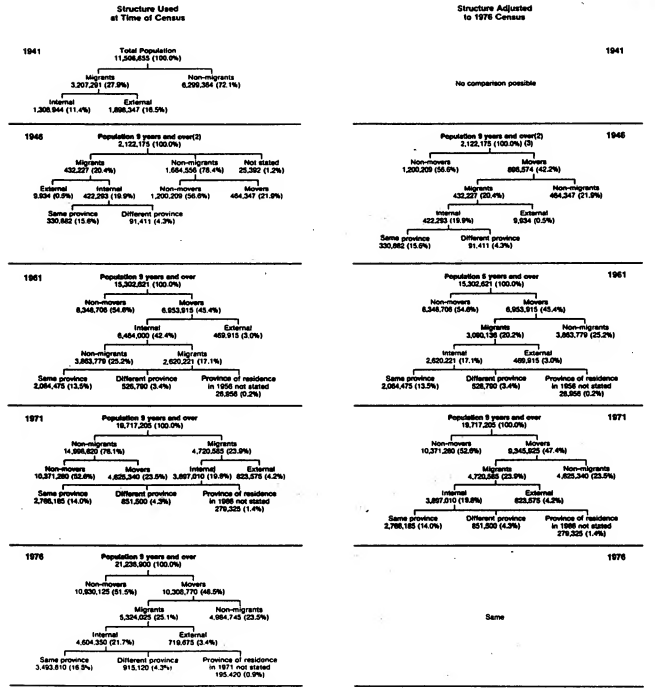
Figure 2. Mobility Status of the Population 5 Years and Over, Canada, 1981 and 1986





Source: Reproduced from 'The Nation: Mobility Status and Interprovincial Migration', 1986 Census of Canada, Catalogue 93-108, Statistics Canada, June 1989

Figure 3. Comparison of Residential Mobility Status Structures, 1941-1976(1)



(1) The basic structural change relates to whether primary classification of the population was made on the basis of migration status (migrants, non-migrants) or mobility status (movers, non-movers). In the 1941, 1946 and 1971 Censuses, the primary delineation was on the basis of migration status, while in 1961 and 1976 it was on the basis of mobility status.
(2) Population 5 years and over for Manitoba, Saskatchewan and Alberta.
(3) Includes persons who did not state their mobility status or place of residence in 1941.
Source: *1941 Census of Canada, General Review, Vol. 1, p. 46;*
1946 Census of the Prairie Provinces, Population, Vol. I, p. XXXV;
1961 Census of Canada, Population Sample, Vol. 4.1, Bul. 4.1-9, Table 12, p. 1;
1971 Census of Canada, Population, Vol. 1.2, Bul. 1.2-7, p. I;
1976 Census of Canada, Population: Demographic Characteristics, Vol. 2, Bul. 2.9, Chart 7.

Source: Reproduced from "A User's Guide to 1976 Census Data on Mobility Status", by H.A. Puderer, Statistics Canada, May 1980

1. Factors Affecting Conceptual Comparability

A number of factors affect historical data comparability of mobility in relation to the conceptual framework. The major areas in which changes have occurred are: coverage, question content, user guidelines for self-enumeration and geographic framework.

a) Changes in coverage and universe:

- Since 1961, the mobility question has been asked of the population age 15 or over; in 1946 the question was asked of persons aged 5 or over, and in 1941 of all ages.

- In 1946, only the Prairie Provinces were covered in the census; in all other censuses (1941 and 1961 on), data were collected for all Canada. Newfoundland was not included in the Census of Canada until 1951, following union with Canada in 1949. In 1961 and 1971, data were not provided separately for each of the territories.

- From 1961 on, the universe for mobility status has included the population 5 years and over, with exclusions, which have varied from census to census. In 1961, mobility status was reported for the population aged 5 years and over residing in private households, excluding residents in collectives, temporary residents, overseas military and government personnel and their families and persons located after the regular census through postal check or re-enumeration. In 1971 and 1976, the universes of population 5 years and over excluded Canadian residents stationed abroad in Armed Forces or diplomatic services. In 1941, the universe included the total population with no exclusions, while in 1946 the universe was the population 5 years and over whose usual residence was in Manitoba, Saskatchewan or Alberta (Puderer, p. 41 and 46).

- In both 1981 and 1986, the mobility universe comprises the population 5 years of age and over residing in Canada, excluding institutional residents. This is in contrast to 1971 and 1976 data which did include institutional residents.

b) Changes in question content:

- In both 1941 and 1946 Censuses, respondents were asked to report their country of prior residence. Since 1961, previous country of residence was not collected for respondents indicating place of residence outside Canada five years earlier.

- From 1971 on internal migrants were asked to specify their CSD of residence five years ago, whereas in previous censuses migrants were also asked whether or not their earlier residence was a farm.

- A question on the number of inter-municipal moves was asked only in 1971.

- In 1986 emphasis was placed on ensuring that Indian reserves were accurately reported in mobility categories. In 1986, the answer categories referred to "city, town, village,

township, other municipality or Indian reserve" compared to "city, town, village, borough or municipality" in 1981 and "city, town, village, municipality" in 1971 and 1976.

- Instructions in the question referring to write-ins of place names were the same between 1971 and 1976, but they were expanded in 1981 to include examples. The 1981 instruction was repeated in 1986.

c) Changes in Self-enumeration Guidelines

Although Census Guidelines in the instruction booklets of census guides for self-enumeration since 1971 varied among the censuses, these guidelines did not differ significantly in content. For all four censuses from 1971 to 1986, respondents were instructed in the census guide to distinguish between CSD type where applicable, e.g., city or township. In 1971 and 1976, respondents were also instructed to distinguish between suburban municipalities and large urban areas, while in 1981 and 1986, these instructions appeared directly on the questionnaire and were, therefore, not included in the respective census guides. As well, in the 1971 and 1976 instruction booklets, respondents were reminded that the intent of the question was to measure actual movements of population, not simply changes in address due to boundary or name changes, and to report residence 5 years ago in terms of present municipal boundaries. Although this particular instruction did not appear in the Census guides in 1981 and 1986, it was included as an additional guideline in the 'Telephone Assistance Service' Supplementary reference manual to deal with inquiries from householders.

The only other difference among the four census booklets/ guides lies with the 1971 census which contained an additional mobility guideline concerning the 'number of moves' question.

Information on 'why we ask this question' was provided to Census representatives (CRs) and Telephone Assistance Service Staff in Census Content Manuals from 1976 on, and directly to respondents for the first time in the 1986 Guide.

d) Changes in Geographic Framework

Comparability of mobility data over the censuses has been affected by both conceptual changes in geography, (such as definitions of rural, and urban, farm, non-farm, metropolitan areas) and changes in CSD, CD, CMA and CA boundaries. Because the number of census geographic areas (e.g. CSDs, CMAs, etc.) and their boundaries change from census to census, the user must exercise caution when using mobility data over two or more censuses. For example, in 1986 there were 6,009 CSDs, 114 CAs and 25 CMAs compared to 5,710 CSDs, 88 CAs and 24 CMAs in 1981. Changes in population size, geographic concepts, definitions and boundaries can affect census geography from one

census to the next.[3] To illustrate, modifications made to delineation criteria for CAs since 1981, (e.g. regarding commuting flows, CSD components) affected the number of CAs in the program for 1986. Details of changes affecting the historical comparability of census geography from 1961 to 1986, as well as definitions and descriptions of available maps, are covered in a variety of census products including the **1986 Census Dictionary** (Cat. No. 99-101), **1986 Census Products and Services - Final Edition** (Cat. No. 99-103), **CMAs/CAs: A 1986-1981 Comparison** (Cat. No. 99-105) and **1986 Census Geography: A Historical Comparison** (Cat. No. 99-106).

A brief summary of Census geographic hierarchy and definitions of geostatistical areas is provided in Appendix C.

The 1976 User's Guide on Mobility provides details of the conceptual changes which took place over the censuses from 1941 to 1976 with respect to the definitions of rural/urban and rural farm and non-farm, and metropolitan areas. Comparability of rural/urban, and farm/non-farm was also affected by the fact that such migration data were collected directly from the respondent prior to 1971, whereas rural/urban, farm/non-farm places of residence 5 years ago were derived through processing in 1971 and 1976.

As an example of changes in the geographic framework, frequency counts of selected geostatistical areas, CSDs, CDs, CAs and CMAs, are compiled for selected censuses from 1941 to 1986, to illustrate the impact on the historical comparability of mobility and migration data (Table 2). For example, the changing number and boundaries of CSDs from one census to another, will to some extent, affect the comparability of the measure of 'migrants' across censuses (since the volume of migrants is partly a function of the number and size of CSDs).

Because of changes in geographic areas between censuses, places of residence 5 years ago must reflect boundaries of the census in question in order to obtain geographic consistency between current and previous place of residence. For example, when tabulating 1986 data on usual place of residence 5 years ago by current place of residence, all areas reflect 1986 boundaries, even when referred to as places of residence in 1981.

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[3]In 1986, a new geographic concept was introduced to the Census, that of Primary Census Metropolitan Area (PCMA) and Primary Census Agglomeration (PCA) (see Appendix C for definitions).

Table 2. A Comparison of the Frequency of Selected Geostatistical Units for Census Years, 1941 to 1986

Geostatistical Units	Census Years							
	1941	1951*	1961	1966	1971	1976	1981	1986
CDs	288	248	248	241	260	265	266	266
CSDs	5,354	4,981	4,470	4,480	5,096	5,546	5,710	6,009
CMAs	12	15	17	19	22	23	24	25
CAs	-	16**	20**	23**	90	88	88	114

*Newfoundland was included in the Census of Canada for the first time in 1951, following union with Canada in 1949.

**In 1951 and 1961, CAs were called "Other Major Urban Areas". In 1966, they were called "Major Urban Areas".

B. Collection and Processing Changes

The various field operations and processing procedures have already been described for the 1986 Census in Section V. The changes over censuses associated with each of the stages in collection and processing and their impact on historical comparability are considered. In general, most of these changes have not significantly affected the comparability of mobility and migration data.

1. Collection

a) Coverage

The main changes that took place in coverage and field collection over the 1941-76 period were the introduction of sampling in 1961 and self-enumeration in 1971. From 1961 on, mobility data were collected on a sample basis. Estimates of Total Standard Error are provided from 1971 on, and take into account the effects of sampling and response error, as well as processing error. As noted earlier, the sample was 33 1/3% of households for the years 1971 and 1976, and 20% of households in 1961, 1981 and 1986.

b) Field Processing

Generally, field edit and follow-up procedures are not applicable prior to 1971, since a canvasser (interviewer) approach rather than self-enumeration was utilized. From 1971 on, mobility has been one of the variables marked for mandatory follow-up during field edit procedures.

Rules for determining follow-up of mobility responses were similar among the 1976, 1981 and 1986 censuses; the most significant change occurred between 1971 and 1976. From 1976 on, Census Representatives (CRs) were directed to follow up situations where the respondent checked 'different city ...' but failed to provide a complete and legible write-in

giving at least the name of the municipality and the province. However, this instruction was not implemented in 1971, and as a result there was a higher incidence of 'province of residence not stated' than in 1976. As noted in Section V, field edit procedures improve response rates (by reducing non-response, partial and multiple response).

2. Data Assimilation

In relation to the processing of mobility data from questionnaire responses into machine readable information, the differences in ROP and HOP between the 1981 and 1986 censuses are minimal, with limited impact on data comparability. One change in procedure that might have some impact on origin-destination data between the two censuses occurred in the coding operation during ROP.

The revised coding procedure between 1981 and 1986 involves the assignment of codes to duplicate name places (DNPs) when respondents fail to report the type of municipality for places that bear the same name (e.g. Kingston township vs. Kingston city, both in Ontario). In 1971, 1976 and 1981 'alternating' procedures were used in assigning codes between two or more CSDs (or other places). In 1976 and 1981, a 'preferred' approach was also incorporated for some of the DNPs such that, where the population differential between the CSDs in question was large, only the CSD of the larger(est) population was coded. Duplicate name places which were to be coded through this approach were identified with an asterisk in the Place Name Code Book (PNCB). There were problems with the application of this procedure, such that coders were always assigning the code of the asterisked place, even when the CSD type was reported. In 1986, while both alternating and preferred approaches were retained, procedures were revised and the assignment of asterisks was based on a thorough review of DNPs and their population differences and ratios. However, there are indications that in 1986 the application of coding procedures during ROP still had problems (see Section VII).

For a review of data assimilation operations prior to 1981, please refer to the 1976 Guide.

3. Edit and Imputation

Edit and imputation (E&I) procedures were almost identical between the 1981 and 1986 censuses. The minor differences involved imputation based on a 'donor' record. In 1981, the variables used to find a donor with a similar set of characteristics were age, sex, mother tongue and marital status; in 1986 the variable aboriginal residence (on/off reserve) was added as an additional characteristic. As well, the geographic search area for donors was narrowed down from the province area in 1981, to the census division level in 1986.

In terms of processing, the most significant change in E&I occurred in 1981. Prior to 1981, non-response (partial/total) to the question on previous place of residence was reported as "not stated". However, for 1981, this "not stated" category was dropped. Non-response to the question on previous place of residence was changed to a specific response

via a combination of deterministic, family and hot-deck imputation assignments. This imputation was achieved using the SPIDER program, which was introduced in 1981.

In principle, the 1981 E&I strategy was similar to that of 1976, with the exception of the imputation of 'not-stated'. Details on E&I procedures for 1976 along with a comparison of E&I procedures from 1941 to 1976, and an assessment of that impact on mobility data, can be found in the 1976 Users Guide.

4. Comparability of Variables Available for Retrieval

The 12 variables available for retrieval in 1986 were also available in 1976 and 1981. While there are no changes in variables between 1981 and 1986, three of the twelve variables, POP5, RUUB5 and CMA5 underwent changes in concept/derivation between 1976 and 1981.

- The variable POP5 is currently based on the population size of the census subdivision (CSD) of residence five years earlier, whereas in 1976, the values of POP5 were based on the CMA/CA size if the CSD was located within a CMA or CA (Puderer, p. 72).

- In 1976, the variable RUUB5 was derived only for internal migrants. From 1981 on, the derivation included all non-movers and non-migrants in addition to internal migrants.

- In 1976, not all CA boundaries were consistent with the boundaries of their component CSD, thereby affecting the derivation of CMA/CA5. The approach used for the assignment of CA of residence 5 years ago when the reported CSD of residence was 'partially in', and 'partially out' of the CA was similar to that for derivation of rural/urban place of residence. Migrants would be included in, or excluded from, the CA in question relative to the proportion of the CSD's 1976 population in and out of the CA (Puderer, pp. 70, 71).

In 1971, as in 1976, the same set of post E&I variables were derived although some changes related to geostatistical areas occurred between the two censuses. Differences in processing concepts prior to 1976 that affect these variables are provided in detail in the 1976 User's Guide on Mobility. The effects of processing changes over the 1941-1976 censuses can be summarized as follows:

- Comparison of rural/urban (rural farm, rural non-farm) migration between two or more censuses is not advised.

- Caution is recommended when analyzing rural/urban migration for the periods 1956-1961, 1966-1971 and 1971-1976 since the methods used to derive previous rural/urban status changed over the 1961 to 1976 censuses.

- Notwithstanding boundary and definitional changes to the geostatistical areas (i.e., CMAs/CAs) the origin-destination data as provided by the relevant censuses have not been seriously affected by processing changes.

VII. DATA QUALITY

A. Provincial and National Levels

Prior to their release, census data on mobility were evaluated for purposes of certification. Evaluation of mobility data consisted of comparisons with past census data, and where possible, with other data sources, particularly estimates of annual interprovincial migration produced by the Estimates Section of Demography Division. For purposes of comparison with previous censuses, the collection and processing of mobility data have not changed significantly since 1961. Between 1981 and 1986, only minor modifications concerning the mobility question and imputation procedures were introduced.

Overall, the quality of 1986 mobility data at the provincial and national levels is good. Comparisons with 1981 suggest that data on mobility status distributions for age groups and provinces are acceptable. Trends in mobility and migration appear to be valid in that they are not a function of changes in processing or types of respondent error; nor does the differential undercoverage between censuses appear to be a strong explanatory factor, although it could be a partial contribution to the declining trends. Patterns of in-, out- and net-interprovincial migration are consistent with those produced from annual estimates for the 1981-86 period, and age/sex differentials in mobility and migration are similar to those observed in earlier censuses. Finally, data on rural/urban migration were derived reasonably well, and age-sex patterns of rural/urban migration are similar to those of 1981.

While the overall quality of mobility data appears reasonable at the national and provincial levels, there are some indications that there may be a general undercount of the volume of migrants due to respondent error/misunderstanding. However, the extent of this undercount is not certain, and neither is it confined to the 1986 Census. The same type of misreporting is applicable in earlier censuses.

1. Mobility Status (MOB5)

Non-Response and Partial Response

The rate of non-response (blanks - includes responses that cannot be coded) for mobility status was 4.4%, and the percentage partial and multiple responses (invalids) was 0.2%. As in the 1981 Census, the population of youths and young adults had the highest percentage of blanks and invalids in 1986, at 7.5% for the 15-19 age group and 5.6% for the 20-34 group. Geographically, the percentage of blanks and invalids was highest in the Territories (as in 1981), at 10.4% for the Yukon, 8.1% for the Northwest Territories for 1986. In general, rates of non-response and partials were slightly higher in 1986 than in 1981, as well as the overall rate of 4.6% vs. 4.0% in 1981. Rates of non-response for the 1986 Census by age groups, for Canada, Provinces and Territories, are provided in Table 3.

Table 3. Non-Response[1] Rates of Population 15+ for Mobility Status, by Selected Age Groups, for Canada, Provinces and Territories, 1986

Area	Age 15+	Age 15-19	Age 20-34	Age 35-64	Age 65+
	Percentage of Population 15+				
Canada	4.6	7.5	5.6	3.4	3.9
Nfld.	3.1	5.6	3.9	1.8	2.3
P.E.I.	4.6	6.1	5.0	3.2	6.5
N.S.	4.6	8.2	6.7	2.6	2.5
N.B.	3.9	6.6	5.0	2.5	3.0
Que.	4.4	7.0	5.1	3.3	4.7
Ont.	4.5	7.1	5.6	3.3	3.5
Man.	5.1	9.2	6.1	3.7	3.3
Sask.	4.5	8.7	5.2	3.2	3.0
Alta.	4.6	7.9	5.4	3.3	2.9
B.C.	5.6	8.7	6.6	4.4	4.6
Yukon	10.4	14.3	12.2	8.3	6.7
N.W.T.	8.1	10.6	8.4	7.0	4.8

[1] Includes invalid responses, but practically all of the rate is due to non-response.

Source: Same as Table 1.

Distributions

Both the unedited and edited distributions of the mobility status variable yield similar results, with the same variations in mobility by age groups and provinces/territories. As indicated in Section V, the change in distribution due to imputation was not significant. Differences are largely related to the inclusion of the 5-14 population in the edited data, for which mobility status is imputed.

Both the unedited and edited distributions show that mobility peaks in the 25-29 age group. This age group has the highest proportions of movers (75.2% edited) and migrants (33.6% edited). See Table 4 for 1986 distributions of population by mobility status, for selected age groups and sex (based on edited data). The age patterns of mobility based on 1986 data are similar to those of the previous census, although the levels of mobility were higher in 1981.

Table 4. Distribution of Population Age 5 Years and Over by Age Groups and Sex Showing Mobility Status, Canada, 1986 Census

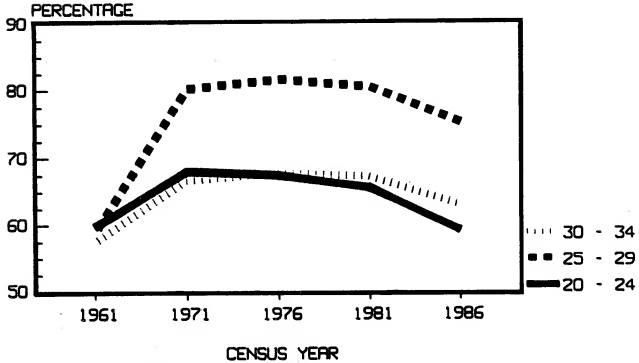
Age and Sex	% Non-Movers	% Movers	% Non-Migrants	% Migrants
Canada	56.3	43.7	24.2	19.5
Males	56.4	43.6	24.1	19.5
Females	56.2	43.8	24.3	19.5
5 - 14	55.5	44.5	25.0	19.5
Males	55.6	44.4	25.0	19.4
Females	55.3	44.7	25.0	19.7
15 - 19	64.2	35.8	19.7	16.1
Males	65.9	34.1	18.7	15.4
Females	62.6	37.4	20.6	16.8
20 - 24	40.8	59.2	30.6	28.6
Males	47.4	52.6	27.2	25.4
Females	34.2	65.8	34.1	31.7
25 - 29	24.8	75.2	41.6	33.6
Males	25.8	74.2	41.2	33.0
Females	23.8	76.2	41.9	34.3
30 - 34	36.9	63.1	35.0	28.1
Males	34.7	65.3	36.3	29.0
Females	39.1	60.9	33.6	27.3
35 - 44	56.4	43.6	24.3	19.3
Males	54.3	45.7	25.3	20.4
Females	58.5	41.5	23.4	18.1
45 - 54	70.9	29.1	16.9	12.2
Males	70.0	30.0	17.3	12.7
Females	71.8	28.2	16.5	11.7
55 - 64	75.9	24.1	13.6	10.5
Males	76.4	23.6	13.2	10.4
Females	75.4	24.6	14.0	10.6
65+	78.3	21.7	12.7	9.0
Males	79.4	20.6	11.5	9.1
Females	77.5	22.5	13.5	9.0

Source: Same as Table 1.

2. Evaluation of Trends in Mobility and Migration

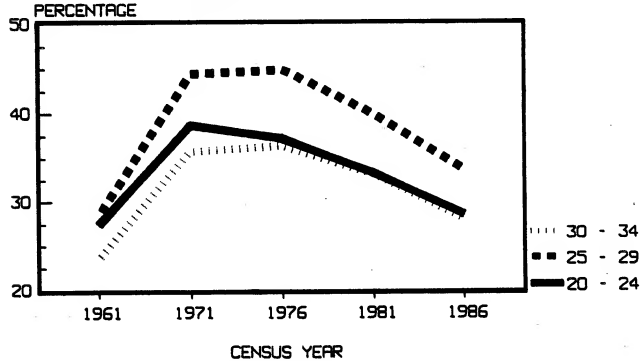
Compared to the censuses of 1976 and 1981, the level of mobility and migration has declined. An examination of the edited mobility status data for the past three censuses shows that there has been a steady decrease in the percentage of movers: from 48.5% in 1976 to 47.6% in 1981 to 43.7% in 1986; and, a steady decrease in the percentage of migrants: from 25.1% to 22.7 to 19.5% in 1986 (see Table 5). Similar downward trends have also occurred across various age groups, as illustrated in Figures 4a and 4b.

FIGURE 4 A.
MOVERS AS A PERCENTAGE OF POPULATION
BY SELECTED AGE GROUPS,
CANADA 1961 TO 1986



SOURCE: CENSUSES OF CANADA, 1961 TO 1986,
UNPUBLISHED DATA

FIGURE 4 B.
MIGRANTS AS A PERCENTAGE OF POPULATION
BY SELECTED AGE GROUPS,
CANADA 1961 TO 1986



SOURCE: CENSUSES OF CANADA, 1961 TO 1986,
UNPUBLISHED DATA

Table 5. Movers and Migrants as a Percentage of Population Age 5 Years and Over, Canada, 1961-1986 Censuses

Census Year	Total 5+ Population	Mobility Status			
		% Non-Movers	% Movers	% Non-Migrants	% Migrants
1961	15,302,600	54.6	45.4	25.2	20.2
1971	19,717,200	52.6	47.4	23.5	23.9
1976	21,238,900	51.5	48.5	23.5	25.1
1981	22,280,100	52.4	47.6	24.9	22.7
1986	23,189,300	56.3	43.7	24.2	19.5

Source: 1986 Census of Canada. The Nation: Mobility Status and Interprovincial Migration, Table 1, Catalogue 93-108.

An assessment was made of various factors that could affect the reliability of these trends. The impact of changes in processing, undercoverage, and respondent error were examined. Could these changes in mobility and migration over the past three censuses be a manifestation of changes in processing and varying data quality? Changes in processing of census mobility data were minimal between 1981 and 1986. However, both respondent error and undercoverage, associated with data quality, do have the potential to impact on the levels of mobility and migration. It is difficult to assess the extent to which the impact of these two factors would vary from census to census, and hence, their effect on trends.

- **Impact of Undercoverage**

Undercoverage rates for the 1986 Census were higher than those for 1981 (3.2% vs. 2.0% overall). Undercoverage is especially relevant to mobility, since people who move are more liable to be missed in the census. According to undercoverage results of the 1986 Census, non-movers were least likely to have been missed in 1986, while persons who migrated to Canada between the censuses had a relatively high chance of being missed (Boudreau and Germain, p.42). Similarly, the 1981 Census also showed higher undercoverage rates for interprovincial migrants than for the general population (see Table 6). Undercoverage due to mobility is most likely to affect the young and adult age groups, since this population tends to be the most mobile.

Table 6. Estimated Population Undercoverage for Mobility Status Characteristics, Canada (Excluding Yukon and Northwest Territories), from the 1981 and 1986 Reverse Record Check

a) 1986 Reverse Record Check

Mobility Status Characteristics	Population Undercoverage Rates	
	Estimated Rate %	Standard Error %
Total (population aged 5 years and over)	**3.42**	**0.12**
Remained within same province	3.19	0.13
- Did not move	1.59	0.14
- Moved within province	5.49	0.27
Moved from another province	5.88	0.72
Moved from outside Canada	8.92	0.60

Source: User's Guide to the Quality of 1986 Census Data: Coverage, Statistics Canada, Catalogue 99-135E.

b) 1981-1986 Reverse Record Check[1]
(Census & Immigrant Frames Only)

Mobility Status Characteristics	Population Undercoverage Rates			
	1981 Census		1986 Census	
	Estimated Rate %	Standard Error	Estimated Rate %	Standard Error
Total (Population aged 5 years and over)	**1.92**	**0.10**	**3.11**	**0.12**
Remained within same province	1.53	0.09	2.89	0.12
Moved from another province	5.35	0.74	5.12	0.68
Moved from outside Canada (immigrants)	8.53	0.82	8.92	0.60

[1]To facilitate comparisons, 1986 rates were calculated on the same basis as 1981 rates: the 1981 rates did not provide any breakdown of the group 'remained within same province' unlike 1986; 1981 rates were confined to the Census and Immigrant Frames; and, 1981 rates were calculated without removing inmates of institutions from the RRC estimates of the 'missed' population.

Source: 1981 rates: "Certification for 1986 Census Mobility Status Data: Summary Report", by M.J. Norris and M. Whalen, Unpublished document, February 1988.
1986 rates: unpublished calculations (Carter, 1988).

The generally higher undercoverage rates of 1986 might possibly be a factor in the lower mobility of the population in 1986, particularly in young age groups such as 20-24, which had an undercoverage rate of 9% in 1986 compared to 5% in 1981. On the other hand, mobility and migration have declined across all age groups, including some in which undercoverage is less of a problem.

- **Impact of Respondent Error**

There is evidence from both current and previous censuses that respondents tend to misreport whether or not they lived in a different CSD 5 years ago, as well as the name of the municipality they had lived in. A study of past censuses (1976, 1981), including results of the 1981 RRC, indicate that some respondents who had lived in metropolitan areas tended to confuse their suburban municipality with the main city (e.g. Ottawa instead of Nepean). To the extent that this type of misreporting occurred among respondents who had moved within a metropolitan area, the level of migration could be underestimated.

As well, other errors in misreporting contributing to undercounts of migrants could include respondents reading only the first part of an answer category (i.e. lived in a different dwelling), but not the rest (i.e. in this city, town...) and indicating this category instead of "different city".

However, it is difficult to assess the extent to which these types of error would vary from census to census, and hence, their impact on the levels and trends in migration over time. Results of the evaluation of the extent of these types of misreporting in 1986 and its impact is examined in Part B on small area data quality. Generally, these respondent errors are not unique to any one census.

- **Impact of Aging**

An additional consideration in assessing these trends in declining mobility is the role of aging. If age-specific mobility and migration rates were to remain the same while the population continued to age, one would expect a decline in mobility/migration for the population as a whole (since mobility decreases with age). An examination of age-sex specific rates for the 1981 and 1986 censuses indicates that mobility and migration have declined across all age groups for both sexes. This indicates that the decline between 1981 and 1986 is not related to aging, but rather to other factors, probably economic in nature. (As well, when 1981 rates for the population as a whole were standardized for the 1986 age-structure, there was practically no change from the unstandardized rates.)

3. Interprovincial Migration (PR, PR5)

The evaluation of provincial migration patterns involved a comparison of 1986 Census data on in, out and net migration with estimates of annual interprovincial migration. Estimates which are produced by the Estimates Section of Demography Division are based on two sources of administration data: Family Allowance and Income Tax files. There are some limitations in comparing the two sets of data (census and estimates) since:

(1) Census data on migration exclude the population aged 0-4;

(2) Census data are imputed for the population aged 5-14; and,

(3) Census data are based on place of residence 5 years ago and, therefore, exclude return and multiple migrants, as well as any migrants who died over the 5-year period.

These limitations will affect comparability more for the volume of interprovincial migration than for patterns of in-, out- and net-migration.

a) Volume of Interprovincial Migration

Because of their differences, the number of interprovincial migrants from the census will be less than the aggregated number of annual interprovincial migrants over the 5-year period. As a percentage of the total number for the 1981-1986 period, based on annual estimates, the 924,500 interprovincial migrants from the 1986 Census represented 62% of the 1.5 million migrants based on Income Tax estimates, and 47% of the almost 2 million from the Family Allowance data.

b) Distributions of In- and Out-Migrants

Both unedited and edited distributions of in- and out-migrants by province and territory from the 1986 Census show that Ontario was the major destination and Alberta, the major sender, of interprovincial migrants over the 1981-86 period. This is in sharp contrast to 1981 Census data for the 1976-81 period, in which Alberta was the major receiver and Ontario the major sender (see Table 7.)

Data from estimates (both Family Allowance and Income Tax) confirm the 1986 distributions of in- and out-migrants, and the changes from 1981 (see Table 8). For both 1981 and 1986, census distributions are closer to the Income Tax-based estimates than to those from Family Allowance. Census and Income Tax estimates are more similar for the 1981-86 period than for 1976-81.

c) Net Interprovincial Migration

A comparison of net interprovincial migration levels between Census and Estimates for 1981-86 indicate that both the direction and magnitude of the levels are consistent between the two sets of data (see Table 9). For most provinces and territories, net migration levels based on Tax estimates are closer to census data than those from Family Allowance. In some cases, Census and Tax estimates are closer than the two administrative-based estimates.

In summary, Census data on interprovincial migration are as expected, clearly reflecting the reversal of the 1976-81 westward trend.

Table 7. Unedited and Edited Distributions of Provincial In- and Out-Migrants Based on Variables PCSD5U and PCSD5, 1981 and 1986

Interprovinical Migration Component	1981		1986		
	Unedited PCSD5U	Edited PCSD5	Unedited PCSD5U	Edited PCSD5	
	%	%	%	%	
In-Migrants					
Nfld.	1.4	1.6	1.7	1.8	
P.E.I.	0.8	0.9	1.0	1.0	
N.S.	4.7	4.8	6.0	5.9	
N.B.	3.5	3.6	3.9	4.0	
Que.	5.5	5.4	7.1	7.2	
Ont.	21.8	22.0	29.6	30.9	
Man.	4.8	4.7	6.4	6.1	
Sask.	5.5	5.6	5.7	5.9	
Alta.	27.7	29.5	19.0	19.2	
B.C.	20.0	20.6	16.1	16.4	
Yukon	1.1	0.6	1.0	0.5	
N.W.T.	3.3	0.8	2.4	1.0	
Canada Number[1]	200,970	1,140,545	167,095	924,480	100%
Out-Migrants					
Nfld.	3.5	3.4	3.7	3.6	
P.E.I.	0.9	0.9	0.9	0.9	
N.S.	5.6	5.5	5.4	5.3	
N.B.	4.5	4.4	4.2	4.1	
Que.	17.9	17.8	14.3	14.1	
Ont.	28.6	28.8	20.5	20.1	
Man.	8.5	8.6	6.3	6.3	
Sask.	6.1	6.1	6.1	6.2	
Alta.	12.1	12.2	21.2	22.2	
B.C.	10.8	10.8	15.5	15.4	
Yukon	0.7	0.6	0.8	0.8	
N.W.T.	1.0	1.0	1.1	1.1	
Canada Number[1]	200,970	1,140,545	167,095	924,480	100%

[1]Unedited counts refer to unweighted data, and edited counts refer to weighted data.

Source: Same as Table 1.

Table 8. Distribution of Provincial In- and Out-Migrants Based on Annual Estimates, 1976-1981 and 1981-1986

Province	1976-1981 Estimates		1981-1986 Estimates	
	Family Allowance	Income Tax	Family Allowance	Income Tax
	%	%	%	%
In-Migrants				
Nfld.	2.6	2.3	2.4	2.5
P.E.I.	1.0	1.0	1.0	1.0
N.S.	5.5	5.3	5.6	6.0
N.B.	4.6	4.0	4.3	4.3
Que.	6.6	6.7	7.8	7.7
Ont.	23.1	23.3	27.5	29.0
Man.	6.1	5.5	6.2	6.3
Sask.	7.0	5.9	6.2	6.3
Alta.	23.7	25.1	21.2	19.8
B.C.	18.3	19.1	16.4	15.3
Yukon	0.6	0.7	0.6	0.6
N.W.T.	0.9	1.1	1.0	1.2
Out-Migrants				
Nfld.	3.0	3.4	3.1	3.5
P.E.I.	1.0	1.0	1.0	1.0
N.S.	5.5	5.7	5.3	5.5
N.B.	4.5	4.6	4.4	4.3
Que.	14.2	15.2	11.7	13.1
Ont.	25.9	26.5	21.6	20.9
Man.	8.5	7.8	6.4	6.4
Sask.	6.3	6.4	6.3	6.4
Alta.	16.4	15.0	22.8	21.9
B.C.	12.7	12.4	15.8	14.8
Yukon	0.7	0.8	0.7	0.8
N.W.T.	1.1	1.3	1.0	1.2
Total Provincial Migrants	2,062,987	1,834,935	1,972,312	1,500,602

Source: Same as Table 1.

Table 9. Summary of Net Interprovincial Migration Estimates Based on Different Sources, 1976-1981 and 1981-1986

Reference Period and Province	Family Allowance Estimates (1)	Income Tax Estimates (2)	Census Estimates (3)	Difference (1-2)	Difference (3-1)	Difference (3-2)
1976-1981						
Nfld.	-8,283	-18,983	-19,830	10,700	-11,547	-847
P.E.I.	1,326	-829	-15	2,155	-1,341	814
N.S.	-68	-7,140	-8,420	7,072	-8,352	-1,280
N.B.	3,846	-10,351	-8,505	14,197	-12,351	1,846
Que.	-156,934	-156,496	-141,725	-438	15,209	14,771
Ont.	-58,819	-57,826	-78,070	-993	-19,251	-20,244
Man.	-49,438	-42,218	-43,600	-7,220	5,838	-1,382
Sask.	8,745	-9,716	-5,820	18,461	-14,565	3,896
Alta.	150,524	186,364	197,645	-35,840	47,121	11,281
B.C.	115,267	122,625	110,930	7,358	-4,337	-11,695
Yukon	-1,592	-933	-545	-659	1,047	388
N.W.T.	-4,574	-4,497	-2,045	-77	2,529	2,452
1981-1986						
Nfld.	-14,837	-15,051	-16,550	214	-1,713	-1,499
P.E.I.	293	751	1,535	-458	1,242	784
N.S.	5,204	6,895	6,280	-1,691	1,076	-615
N.B.	-2,239	-65	-1,370	-2,174	869	-1,305
Que.	-76,040	-81,254	-63,300	5,214	12,740	17,954
Ont.	115,497	121,767	99,350	-6,270	-16,147	-22,417
Man.	-3,700	-2,634	-1,550	-1,066	2,150	1,084
Sask.	-668	-2,974	-2,820	2,306	-2,152	154
Alta.	-34,073	-31,676	-27,670	-2,397	6,403	4,006
B.C.	13,289	7,382	9,500	5,907	-3,789	2,118
Yukon	-2,381	-2,775	-2,660	394	-279	115
N.W.T.	-345	-366	-755	21	-410	-389

Source: Same as Table 1.

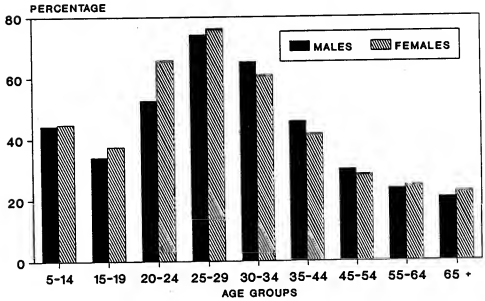
4. Evaluation of Age-sex Specific Patterns

Age-sex specific mobility and migration rates are plotted in Figures 5a and 5b, respectively, for 1986 Census data. The pattern of age-sex specific rates is similar to that of earlier censuses, in which persons aged 25-29 are the most mobile, after which mobility declines with increasing age until the retirement years.

• Sex differentials

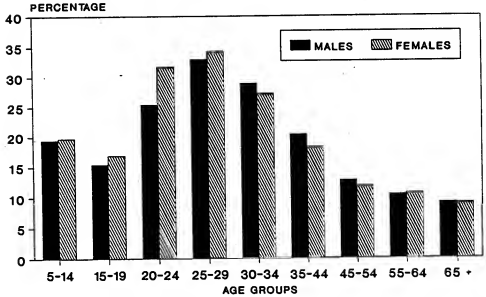
Census data for 1986, as well as for earlier censuses, indicate that during the early adult years (15-19, 20-24), females tend to be more mobile than males. In 1986, two-thirds of females aged 20-24 had moved over the past five years compared to just over half of males of the same age (see Figure 5A). However, the sex differential, while pronounced for intraprovinical migration, tends to disappear in the case of interprovincial migration, as was the situation with 1981 Census data with males and females aged 20-24 being equally mobile. Census data from 1986 indicated that, for the 20-24 age group, females moved among provinces to a slightly greater extent than did males.

FIGURE 5 A. MOVERS AS A PERCENTAGE OF POPULATION BY SELECTED AGE GROUPS AND SEX, CANADA, 1986 CENSUS



SOURCE: 1986 CENSUS, UNPUBLISHED DATA

FIGURE 5 B. MIGRANTS AS A PERCENTAGE OF POPULATION BY SELECTED AGE GROUPS AND SEX, CANADA, 1986 CENSUS



SOURCE: 1986 CENSUS, UNPUBLISHED DATA

These sex differentials in mobility observed for 1986 generally appear to be valid, and comparable with earlier censuses, with the possible exception of interprovincial migration. It is usually thought that the greater mobility of women during the early adult years may be related to the formation of unions through marriage and cohabitation, which tend to occur at younger ages for females. However, the user should also be aware of the possible contributing effect of differential undercoverage between males and females.

- **Impact of Differential Undercoverage**

The impact of high undercoverage rates in the 20-24 age group, and their differences for males and females, should be considered. In 1986, the 20-24 age group had the highest undercoverage rate, at 9.06%. Rates for males and females in this group were 10.71% and 7.33%, respectively. In 1981, differences in undercoverage rates between males and females aged 20-24 were less pronounced at 6.03% and 4.98%, respectively. Perhaps the greater sex differential in undercoverage rates in 1986 could be a contributing factor towards the high mobility of females aged 20-24, particularly in the case of interprovinical migration.

5. Rural/Urban Place of Residence (RUUB5)

- **Assignment of Rural/Urban Classification**

As indicated in Section V, respondents who reported CSDs which had mixed rural/urban population components were proportionally assigned rural/urban place of residence 5 years ago (RUUB5) on the basis of the current (1986) rural/urban population size of the CSD. In 1986, there were 501 CSDs out of 6,009 which had mixed rural/urban population components. These mixed CSDs were verified to ensure that the resulting proportional rural/urban classification of respondents for '5 years ago' corresponded to the CSDs current percent rural/urban. Comparisons between RUUB5 and the current rural/urban size of each mixed CSD indicated that the variable on rural/urban place of residence was reasonably derived. Only 10 of these mixed CSDs showed a difference of 10 percentage points or more, with a processing bias in favour of rural. However, the populations are small and distributed among several provinces, such that the net effect can be considered insignificant.

- **Comparison between 1981 and 1986**

Comparisons between 1981 and 1986 census data on rural/urban migration indicate similar patterns of origin-destination flows and of net gains/losses in rural areas by age groups. Table 10 shows that the flow of migrants from urban-to-rural areas was larger than the flow in the opposite direction, resulting in a net inflow of migrants to rural areas for both periods. However, the net gains and losses were reduced in 1986.

Table 10. Rural/Urban Migration, Canada, 1976-1981, 1981-1986

	1981 Place of Residence			
	1976-1981	Urban	Rural	Total Out-Migration
1976 Place of Residence	Urban	2,785,800	863,075	3,648,875
	Rural	607,320	256,065	863,385
	Total in	3,393,120	1,119,140	4,512,260
	Net urban-rural	-255,755	255,755	
	1986 Place of Residence			
	1981-1986	Urban	Rural	Total Out-Migration
1981 Place of Residence	Urban	2,488,260	702,085	3,190,345
	Rural	624,730	234,875	859,605
	Total in	3,112,990	936,960	4,049,950
	Net urban-rural	-77,355	77,355	

Source: 1981 Census of Canada, Population, Mobility Status, Table 7, Catalogue 92-907.
1986 Census of Canada, Unpublished Data.

Net migration rates by age and sex for the rural areas show almost identical patterns of loss and gain between 1981 and 1986 censuses. Generally, a net loss of migrants from rural areas occurred among the young adults aged 15-19 and 20-24, and among the elderly, aged 70+; all other age groups experienced net inflows to rural areas.

B. Small Area Data Quality

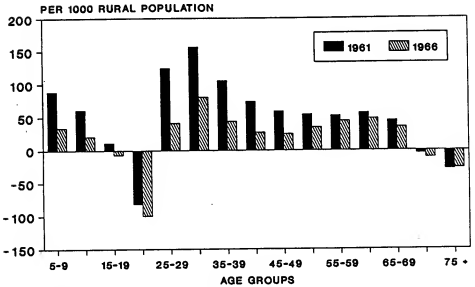
Mobility data, like most population data, are subject to undercounting, respondent misreporting and processing error. The impact of these errors at the national and provincial levels is generally not significant. However, the user is cautioned when analyzing mobility data at the sub-provincial level, particularly at the CSD level.

1. CSD-Level Migration (PCSD, PCSD5)

The following cautionary note is provided in the 'Special Notes' Section of various 1986 Census publications containing mobility data, including publication 93-108 on Mobility Status and Interprovincial Migration.

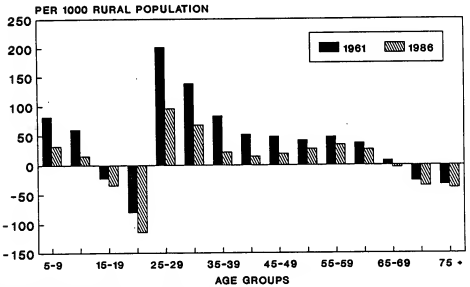
> At the CSD level, users are advised to exercise caution in the use of data on migrants particularly for suburban municipalities within large metropolitan areas. Counts for total migrants, including in- and out-migrants, could be distorted due to suspected types of mis-response such as (a) respondents in metropolitan areas reporting the main city rather than the municipality they actually lived in five years

FIGURE 6 A. NET-MIGRATION RATES FOR RURAL AREAS, MALES, CANADA, 1981 AND 1986 CENSUSES



SOURCE: CENSUSES OF CANADA, 1961 & 1966, UNPUBLISHED DATA

FIGURE 6 B. NET-MIGRATION RATES FOR RURAL AREAS, FEMALES, CANADA, 1981 AND 1986 CENSUSES



SOURCE: CENSUSES OF CANADA, 1981 & 1986, UNPUBLISHED DATA

earlier (e.g., reported Toronto instead of Scarborough); (b) respondents failing to indicate a move from a different CSD if they perceived that they were still in the same main city (e.g., moved from Toronto to Scarborough but indicated that they still lived in the same municipality); and (c) respondents reporting moves according to out-of-date boundaries.

In 1988, a study was launched to evaluate the 1986 Census data on mobility. The findings were reported in an unpublished study prepared by J.A. Norland of Demography Division in February, 1989. The study provided a comprehensive evaluation of the quality of mobility data at the small area level. Following are some principal findings and recommendations to users of mobility data on the CSD and CD levels. Users should note that these findings relate to mobility variables at the CSD and CD level (PCSD, PCSD5, PCD, PCD5). Details of findings and recommendations are taken verbatim from the report. Related tables adapted from the small area study, are presented in Appendix D.

2. Principal Findings re CSD/CD-Level Migration Data

- **Migration Rates for 'Small CSDs' Unreliable**

In 1986 there were 6,009 CSDs, of which 1,553 (about 25%) had base populations aged 5 years and over, below 250; the latter are labelled "small CSDs". Upon a preliminary examination, the migration rates for the small CSDs were deemed, on the whole, to be quite unreliable (see examples, Table 1, Appendix D). Added to this finding were considerations associated with sampling, e.g., the very wide confidence interval for migration rates based on a base population below 250. Hence, ... this study [concentrated] on the 4,456 larger CSDs, i.e., on those with base populations of 250+. Unless otherwise specified, the subsequent discussions refer to the larger CSDs only.

- **Significant number of larger CSDs have excessive out-migration rates**

Flagging CSDs with extreme migration rates (excessively high rates as well as excessively low rates) resulted in the identification of a large number of such CSDs, especially with regard to out-migration. For example, of the 4,456 CSDs under study, 780 (18%) showed out-migration rates below 5%, including 166 CSDs (4%) with zero out-migration rates. Additionally, 442 CSDs (10%) showed out-migration rates in excess of 40%, including 43 CSDs (1%) with rates exceeding 100%. (See Table 2 and examples in Tables 3 and 4, Appendix D.)

The definition of "excessive rates", as given in the example cited above, is necessarily arbitrary. In addition, excessive rates *per se* do not indicate inaccurate data, for genuine demographic trends may also result in abnormally high migration rates. [However, further analysis indicates that respondent and processing errors can be significant factors in 'excessive rates'.]

- **Special problems involve data for "duplicate name places", e.g., Barrie, for which there exist the township of Barrie/Frontenac County and the city of Barrie/Simcoe County. Data for some "duplicate name places" have been found to be afflicted with serious errors.**

- **Similarly, selected CSDs within CMAs are deemed to involve considerable error, a prime example being Victoria and Saanich.**

- **There are indications that the combination of respondent and processing error is responsible for distortion of CSD migration rates based on analysis of CSDs in Duplicate Name Places and CMAs.**

Inasmuch as one refers to processing error generated by coders, [the source of errors may be traced] at least partially by a case-by-case check of respondent write-in entry (as it appears on the Census questionnaire) versus coder entry (as reflected in the Census database). Such a micro-match was undertaken on a small scale in the context of analyzing the data for duplicate name places (DNPs). The two places studied (Barrie, Ont., and Sainte-Julie, Qué.), showed definitively that the vast majority of the out-migrants from the pertinent CSDs were incorrectly assigned by the coder. This part of the study also revealed an associated error, viz., the assignment of incorrect CD codes.

Circumstantial evidence concerning many other DNPs where one or more CSDs shows "suspect" migration rates traced the source of error either to deficiencies in the Place Name Code Book (PNCB) or to coder negligence.

To underscore the significance of the DNP problem, note, that one-quarter or more of all CSDs may be involved (the exact number depends on the specific definition one adopts to identify DNPs). Additionally, synthetic measures such as the standard deviation, as well as detailed listings, indicate that DNPs include CSDs with some of the most extreme migration rates, even if one restricts the data to the larger CSDs alone (see Tables 5 and 6, Appendix D).

The analysis of the mobility data for CSDs which fall within the boundaries of Canada's CAs and CMAs revealed, on the whole that the distribution of the rates for these CSDs were no less acceptable than were those for all CSDs combined. Nonetheless, indirect evidence pointed clearly to grossly deficient data in selected areas, such as the CSDs of Saanich and Victoria in the CMA of Victoria, B.C. (see Table 7, Appendix D).

The implications from analyzing the mobility data for CSDs in DNPs and CMAs suggest that a combination of respondent and processing error (especially, coder error) are responsible for distorting the CSD migration rates derived from the 1986 Census. Note, in this connection, that: (i) the codes for "place of residence 5 years ago" are affected by these errors but; (ii) the codes for place of residence at census time are not affected in similar ways. This fact explains why the out-migration rates for CSDs appear to be worse, on the whole, than do the in-migration rates. [Respondent and coder errors affect the standard Geographical Classification Codes (SGC) for 'CSD place of residence 5 years ago' and hence, affect out-migration data derived from these codes.]

- **Boundary Changes Not Significant in 'Suspect' Migration Rates**
  To examine whether the 1986 migration rates were affected by CSD boundary changes, this study flagged the subset of CSDs which, between 1981 and 1986, underwent annexations, dissolutions and similar changes (if, however, the changes affected the CSD area but did not affect the base population, the pertinent CSD was not flagged). ... The conclusion drawn [from a detailed analysis] asserted that, on the whole, boundary changes *per se* could not explain the "suspect" migration rates found in any CSDs.

- **Mobility data for selected CDs may also include considerable error, probably stemming from a general undercount of internal migrants in the census: the smaller CDs, in particular, should be examined carefully** (see Table 8, Appendix D). **The general undercount of internal migration is probably due to a combination of respondent error and undercoverage.**

  Per se, the CD migration rates appeared to fall within reasonable limits. On the other hand, the investigation in the context of population change raised doubts concerning the migration rates for the majority of the CDs. A further analysis, using RCT data, raised the possibility that an undercount of migrants in the 1986 Census constitutes a major distorting factor for the census mobility data as a whole.

  More insight into the undercount issue came from a record-by-record match between the 1986 Reverse Record Check (RRC) data and the 1986 Census database. This match, performed for about 6,000 individuals, indicated a considerable gap between the overall number of migrants: 1,306 according to the RRC, but only 906 according to the Census. Additionally, only 840 persons were classified as migrants according to both sources.

3. Recommendations for Users re CSD/CD-Level Migration Data

Recommendation 1 - Refer to Areas with Large Base Populations.
The large number of "suspect" migration rates for CSDs with base populations below 250, together with considerations based on sampling and confidence intervals, constitute three arguments which justify using 250 as the minimal cut-off point for base populations that are "too small". A higher cut-off point for CSDs, say at the population level of 500, should not be ruled out, even though this limit would delete 1,000 more CSDs than does the 250 cut-off point. As for CDs, there seems to be little gain in segregating the ones with small base populations (say, the 13 CDs with 1986 base populations between 1,000 and 10,000). Generally, the user is advised to use discretion in defining areas having "small base populations", and to apply as a guide the three considerations outlined above with regard to CSDs.

Recommendation 2 - Beware of "Special Situations".
Users working with small-area data, are urged to draw on our findings as well as on their own field knowledge to assess whether the small-area data under question are likely to be affected by such problems as duplicate names and boundary changes. Excessively high and low mobility rates may serve as an indicator but not as a foolproof guide. On the one hand, a given area (say a CD with a duplicate-name CSD within it) may not be affected to the point of generating a "suspect" mobility rate even though the mobility data are distorted. On the other hand, small areas may be subject to genuine demographic trends which generate "suspect" mobility rates, as in the case of areas undergoing rapid urban development - a recurring "special situation". Distinguishing between distorted and genuine mobility rates, when the group of "suspect" rates is considered, must be based on the analyst's field knowledge as well as on findings from studies such as the one reported here.

Finally, [... data users ...] should be aware that the census mobility data are subject to: (i) distortions of the matrix showing migrants' place of origin and destination; and (ii) undercounting [of migrants]. One should bear in mind that these are two distinct types of error and their impact may differ from one set of spatial categories (say, CSDs) to the next (say, provinces).

Further details of these findings and recommendations are provided in the report by J.A. Norland.

Users should also note that original plans to publish in-, out- and net-migration levels for CSDs in the 1986 Census Profile series were altered as a result of some of these findings. Only mobility status was finally published in the CSD profiles because of the significant number of CSDs with 'excessive' out-migration rates. While the mobility status variable implicitly includes in-migrants for each CSD, in-migration rates are much less of a problem, with the exception of small CSDs.

Also, there is some evidence to suggest that there is an undercount of migrants in the Census, stemming largely from respondent error, in addition to undercoverage. However, the factors contributing to this suspected undercount in 1986 are also present in earlier censuses, and it is difficult to know to what extent this type of undercounting varies from census to census.

In general, users should assume that the problems identified in the evaluation of mobility data at the CSD and CD level are not unique to 1986 alone. Factors contributing to these data quality problems existed in earlier censuses.

4. CMA/CA Level Migration Data (CMA, CMA5)

Data at the CMA/CA level are reliable since they are not subject to the same type of misreporting and processing problems that afflict CSD-level data. Origin-destination flows and levels of in-, out- and net-migration at the CMA/CA level appear reasonable for 1986. Generally, CMA/CA level patterns at gain and loss tend to reflect those observed in interprovincial migration (see Table 11).

However, the user is cautioned that analysis of migration within CMA/CAs is problematic owing to data quality problems of CSDs within CMAs.

Table 11. In-, Out- and Net-Migration for Census Metropolitan Areas, 1986 Census, and Net-Migration, 1981 Census

Census Metropolitan Area	1986 Census[1] 1981 - 1986			1981 Census[2] 1976-1981
	In-Migration	Out-Migration	Net Migration	Net Migration
Calgary	104,065	110,165	-6,100	66,460
Chicoutimi-Jonquière	9,990	15,890	-5,900	-3,005
Edmonton	97,285	112,830	-15,545	34,975
Halifax	42,920	35,860	7,060	-4,750
Hamilton	48,710	43,810	4,900	-3,230
Kitchener	39,345	29,350	9,995	-1,585
London	44,580	42,605	1,975	-1,930
Montréal	181,120	163,350	17,770	-105,590
Oshawa	32,000	25,460	6,540	9,300
Ottawa-Hull (Ont. Pt.)	90,340	62,345	27,995	-3,465
Ottawa-Hull (Qué. Pt.)	17,340	10,510	6,830	-4,540
Ottawa-Hull	107,675	72,850	34,825	-8,010
Québec	49,700	47,025	2,675	-1,285
Regina	26,200	24,800	1,400	1,780
Saint John (N.B.)	10,055	10,820	-765	-2,725
Saskatoon	34,525	26,830	7,695	7,770
St. Catharines-Niagara	23,505	28,775	-5,270	-5,495
St. John's (Nfld.)	15,190	15,000	190	-3,065
Sherbrooke	15,765	15,795	-30	...
Sudbury	11,535	19,675	-8,140	-12,800
Thunder Bay	10,855	10,260	595	-940
Toronto	264,770	184,495	80,275	-18,240
Trois-Rivières	12,415	15,675	-3,260	-660
Vancouver	135,235	102,095	33,140	18,820
Victoria	41,110	33,335	7,775	8,730
Windsor	16,985	19,085	-2,100	-12,290
Winnipeg	57,050	52,295	4,755	-22,970

(1) Based on 1986 CMA boundaries
(2) Based on 1981 CMA boundaries

Sources: 1981 Census of Canada Catalogue 92-907, Table 4.
1986 Census of Canada Catalogue 93-156, Table 13.

VIII. CONCLUSION

This User Guide has provided information on a number of topics concerning 1986 Census of Canada data on mobility and migration. An assessment of the historical comparability of these data from the 1961 Census through to the 1986 Census has also been included. In the case of data quality, the user is reminded that analysis of migration data at the CSD level should be done with caution.

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APPENDIX A

MOBILITY QUESTIONS

AND GUIDE INSTRUCTIONS

1961 TO 1986

1961 - CENSUS QUESTIONNAIRE - MOBILITY QUESTION

This Form is required for all persons 15 years of age and over in this household

Office use only

Questions 1-5 to be completed by the Enumerator (as applicable)

1. Did you live in this dwelling 5 years ago, on June 1, 1956?	Same dwelling ☐ 0	Same city, town, etc., (not same home) ☐ 1	Outside of Canada ☐ 2	Different city, town, village, etc., in Canada ☐ 3
	Omit Questions 2 and 3			
2. In what city, town, village or municipality did you live?	..... (Name of city, town, village, municipality, etc.)	..... (Province or territory)		
	Important: If outside a city or town limit, specify name of suburban municipality, and not that of city or town.			
3. Was this dwelling on a farm or small agricultural holding? (One acre and $50 sales)	No ☐ 0	Yes ☐ 1	Office use: Prov. / Type / M.A.	
Questions 4 and 5 for all married, widowed and divorced women				
4. What was the date of your (first) marriage?	Year.....	Jan.-May ☐ 0	June-Nov. ☐ 1	Dec. ☐ 2
5. How many live-born children have you had?	.....	or	None ☐	

1971 - CENSUS QUESTIONNAIRE - MOBILITY QUESTION

26. Where did you live 5 years ago, on June 1, 1966 ?

- O Same dwelling → SKIP TO QUESTION 28
- O Same city, town, village or municipality (*not same dwelling*)
- O Outside of Canada
- O Different city, town, village or municipality in Canada, give its name →

City, town, village, municipality, etc.

County Province

IMPORTANT: *If outside city or town limit, specify name of suburban municipality and not of city or town.*

27. How many times have you **MOVED** from one Canadian city, town, village or municipality to another since June 1, 1966 ?
Count moving away and returning to the same place as 2 moves.

O None	O 2	O 4
O 1	O 3	O 5 or more

1971 - INSTRUCTION BOOKLET - GUIDELINES FOR MOBILITY QUESTION

26

- Be sure to fill one and *only* one of the four circles.
- If you have filled the bottom circle, be sure to enter the *name* of your locality of residence 5 years ago and the county and province in which it is located. Where a name is used both for a parish and a town, etc., please indicate which is correct by adding the type, i.e. Granby *town* or Granby *parish*. If you were living in a suburban municipality, enter its name rather than the name of the large metropolitan area of which it forms a part, e.g., East Kildonan rather than Winnipeg.
- We want to measure *actual* movements of population within Canada, not changes in address due *only to* municipality boundary changes (or name changes). Therefore, consider your residence 5 years ago in terms of *present* municipality boundaries.

27

- If you came to this country from abroad, *do not include your arrival in Canada* as a "move", but count each later move within Canada since June 1, 1966.
- *Students* who have left their home base temporarily to attend university or to take summer employment, should *not* count these as moves.

1976 - CENSUS QUESTIONNAIRE - MOBILITY QUESTION

12.

Where did you live 5 years ago, on June 1, 1971?

- ○ Same dwelling
- ○ Different dwelling in same city, town, village or municipality
- ○ Outside Canada
- ○ Different city, town, village or municipality in Canada. Print its name below.

City, town, village, municipality, etc.

County

Province

Important: *If outside city or town limits, specify name of suburban municipality and not main city or town.*

1976 - INSTRUCTION BOOKLET - GUIDELINES FOR MOBILITY QUESTION

12 Fill one and only one of the four circles

If you have filled the bottom circle, be sure to enter the name of your locality of residence 5 years ago, and the county (or regional municipality, regional district, etc.) and province in which it was located. Where a name is used for both a town and a parish, e.g. Bathurst *town* and Bathurst *parish;* or a town or city and a township, e.g. Kingston *city* and Kingston *township;* please indicate which is correct by adding the type. If you were living in a municipality which is part of a large metropolitan area, enter its name rather than the name of the large metropolitan area, e.g. North Vancouver rather than Vancouver; Scarborough rather than Toronto; Laval rather than Montreal; Sainte-Foy rather than Quebec.

We want to measure actual movements of population within Canada, not changes in address due only to municipality boundary or name changes. Therefore, consider your residence 5 years ago in terms of *present* municipal boundaries.

1981 - CENSUS QUESTIONNAIRE - MOBILITY QUESTION

36. Where did you live 5 years ago on June 1, 1976?

Mark one box only

NOTE: *If your place of residence 5 years ago was a municipality within a large urban area, be careful not to confuse suburban municipalities with the largest city. For example, distinguish between Montréal-Nord and Montréal, Scarborough and Toronto, West Vancouver and Vancouver.*

04 ☐ This dwelling

05 ☐ Different dwelling in this city, town, village, borough, or municipality ▶ *Go to Question 37*

06 ☐ Outside Canada

07 ☐ Different city, town, village, borough, or municipality in Canada *(specify below)*

City, town, village, borough, or municipality

County

Province or territory

08 [illegible]

Question 36

Give the information for your usual residence 5 years ago even if you were away temporarily on June 1, 1976.

Mark only one of the four boxes.

If you marked "Different city, town, village, borough, or municipality in Canada", be sure to enter the name of your locality of residence 5 years ago, and the county (or regional municipality, regional district, etc.) and province or territory in which it is located. If the same name is used for both a city or town and a parish, township or other municipality in the county of your residence 5 years ago, indicate which is correct by specifying the type (e.g., St. Andrews *town* or St. Andrews *parish*; Granby *city* or Granby *municipality*; Kingston *city* or Kingston *township*).

1986 - CENSUS QUESTIONNAIRE - MOBILITY QUESTION

24. Where did you live 5 years ago, that is, on June 1, 1981?

Mark one box only

NOTE: *If your place of residence 5 years ago was a municipality within a large urban area, be careful not to confuse suburban municipalities with the largest city. For example, distinguish between Montréal-Nord and Montréal, Scarborough and Toronto, West Vancouver and Vancouver.*

16 ☐ This dwelling

17 ☐ Different dwelling in this city, town, village, township, municipality or Indian reserve

18 ☐ Outside Canada

Go to Question 25

19 ☐ Different city, town, village, township, other municipality or Indian reserve in Canada *(specify below)*

City, town, village, township, other municipality or Indian reserve

County

Province or territory

20

Question 24

Give the information for your usual residence 5 years ago even if you were away temporarily on June 1, 1981.

Mark only one of the four boxes.

If you marked "Different city, town, village, township, other municipality or Indian reserve in Canada", be sure to enter the name of your locality of residence 5 years ago, and the county (or regional municipality, regional district, etc.) and province or territory in which it is located. If you lived in an area where the same name is used for both a city, town or village, and a parish, township or other municipality, indicate which is correct by specifying the type (e.g., St. Andrews **town** or St. Andrews **parish**; Granby **city** or Granby **municipality**, Kingston **city** or Kingston **township**).

The internal migration information obtained from this question is needed to prepare accurate estimates and projections of national and provincial populations. Population estimates are used as a basis for distributing funds between the federal government and the provinces. Population projections are required for planning by both government and business, for example, in determining future needs for housing, education and social services.

APPENDIX B

1986 MOBILITY VARIABLES FOR RETRIEVAL

Twelve Mobility Variables Available for Retrieval, 1986 Census

1. **MOB5**: MOBILITY STATUS - PLACE OF RESIDENCE 5 YEARS AGO

   Refers to the relationship between a person's usual place of residence on Census Day and his/her usual place of residence five years earlier. On the basis of this relationship, the population is classified as non-movers and movers (mobility status). Within the category movers, a further distinction is made between non-migrants and migrants (migration status).

2. **PR5**: PROVINCE OF RESIDENCE 5 YEARS AGO[1]

   Refers to the person's usual province or territory of residence on June 1, 1981, five years prior to Census Day.

3. **PR**: CURRENT PROVINCE OF RESIDENCE[1]

   Refers to the person's usual province or territory of residence on Census Day, June 3, 1986.

4. **PCD5**: CENSUS DIVISION OF RESIDENCE 5 YEARS AGO[1]

   Refers to the person's usual census division of residence on June 1, 1981, five years prior to Census Day. For a definition of Census Division, refer to Appendix C.

5. **PCD**: CURRENT CENSUS DIVISION OF RESIDENCE[1]

   Refers to the person's usual CD of residence on Census Day, June 3, 1986.

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[1] Three types of geographic areas are systematically identified by codes of the Standard Geographic Classification (SGC), whether curent place of residence or origin of migrants. These are:

(a) Provinces and territories (PR, PR5)
(b) Census divisions (PCD, PCD5)
(c) Census subdivisions (PCSD, PCSD5)

These areas are hierarchically related. PCSDs and PCSD5s aggregate to PCDs and PCD5s which in turn aggregate to a province or territory, PR and PR5. This relationship is reflected in the seven digit SGC code as follows:

	PR	CD	CSD
SGC	XX	XX	XXX
PR, PRS	XX		
PCD,PCD5	XX	XX	
PCSD,PCSD5	XX	XX	XXX

(X = one digit)

6. **PCSD5**: CENSUS SUBDIVISION OF RESIDENCE 5 YEARS AGO[1]

Refers to the person's usual municipality (CSD) of residence on June 1, 1981, five years prior to Census Day. For a definition of CSD, refer to Appendix C.

7. **PCSD**: CURRENT CENSUS SUBDIVISION OF RESIDENCE[1]

Refers to the person's usual CSD of residence on Census Day, June 3, 1986.

8. **CMA5**: CENSUS METROPOLITAN AREA OR CENSUS AGGLOMERATION OF RESIDENCE 5 YEARS AGO

Refers to the CMA or CA in which a person usually resided on June 1, 1981, five years prior to Census Day. For a definition of CMA or CA, refer to Appendix C.

9. **CMA**: CURRENT CENSUS METROPOLITAN AREA OR CENSUS AGGLOMERATION OF RESIDENCE

Refers to the person's usual residence on Census Day, June 3, 1986.

10. **POP5**: POPULATION SIZE GROUP OF RESIDENCE 5 YEARS AGO

Refers to the population size of the census subdivision where the person usually resided on June 1, 1981, five years prior to Census Day. The size of the census subdivision is based on the 1986 population.

11. **POP**: POPULATION SIZE GROUP OF CURRENT PLACE OF RESIDENCE

Refers to the population size group of the census subdivision where the person currently resides (on June 3, 1986).

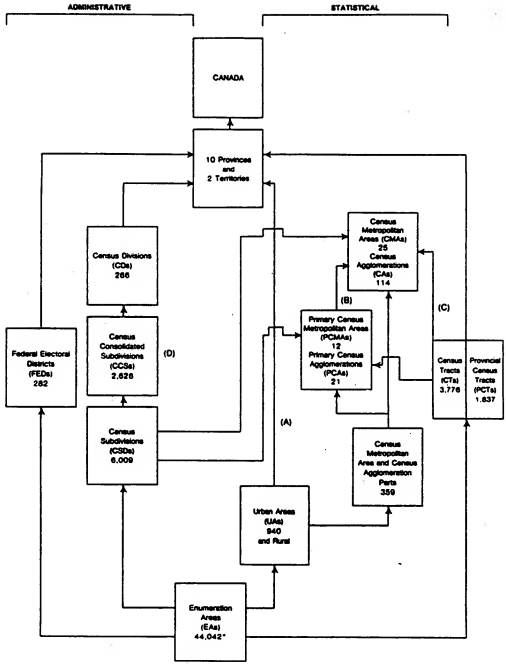
12. **RUUB5**: RURAL-URBAN PLACE OF RESIDENCE 5 YEARS AGO

Refers to the rural or urban classification of the census subdivision where the person usually, resided on June 1, 1981, five years prior to Census Day. For part urban, part rural CSDs, Rural-Urban Place of Residence 5 Years Ago was assigned relative to the 1986 urban to rural population distribution for that CSD.

APPENDIX C

1986 CENSUS GEOGRAPHIC HIERARCHY AND DEFINITIONS

Reproduced from the 1986 Census Handbook Reference,
Statistics Canada, Cat. No. 99-104



(A) 5 urban areas cross provincial boundaries.
(B) 12 of the 25 CMAs and 2 of the 114 CAs are broken down into PCMAs/PCAs.
(C) All 25 of the CMAs, but only 12 of the 114 CAs, have a census tract program.
(D) Defined by Statistics Canada, in conjunction with the provincial authorities, as a statistical area.
*Final count.

Definitions, historical boundary changes and descriptions of available maps are covered more thoroughly in other census reference products, including the **1986 Census Dictionary** (Cat. No. 99-101), the **1986 Census Products and Services - Final Edition** (Cat. No. 99-103), the **CMAs/CAs: A 1986-1981 Comparison** (Cat. No. 99-105) and the **1986 Census Geography: A Historical Comparison** (Cat. No. 99-106).

1. Province/Territory

   The ten provinces and two territories are the major political units of Canada. They are also the basic geographic units for tabulating and cross-classifying census data.

2. Federal Electoral District (FED)

   Federal electoral districts are established by the Parliament of Canada. Each FED is represented by a member in the House of Commons.

3. Census Division (CD)

   Census division is a general term that applies to census divisions, counties, regional districts, regional municipalities, and five other types of geographical areas. These areas are made up of groups of census subdivisions.

4. Census Subdivision (CSD)

   Census subdivisions are municipalities, Indian reserves, Indian settlements and unorganized territories. In Newfoundland, Nova Scotia and British Columbia, CSDs can also be geostatistical areas created by Statistics Canada, in cooperation with the provinces, as equivalents for municipalities.

5. Census Consolidated Subdivision (CCS)

   A CCS is a group of contiguous census subdivisions.

   Census consolidated subdivisions are delineated according to these rules:

   - all CSDs smaller than 25 square kilometres are grouped with a larger CSD;
   - a CSD larger than 25 square kilometres forms a CCS of its own unless it is surrounded on more than half its perimeter by another CSD; then it is included as part of the CCS formed by the other CSD;
   - a CSD with a population greater than 100,000 forms a CCS on its own, if it is surrounded by rural CSDs.

6. Enumeration Area (EA)

An enumeration area is the area canvassed by one Census Representative. It is the basic building block of all standard geostatistical areas. EAs are defined by the number of households and by geographic boundaries -- an EA never cuts across a boundary recognized by the census. Enumeration areas are normally the smallest geographic units for which census data are available.

7. Census Metropolitan Area (CMA) and Census Agglomeration (CA)

A CMA is an urbanized core of at least 100,000 population (based on the previous census), together with its main labour market area. A CA is the main labour market area of an urbanized core with a population of at least 10,000, based on the previous census. The 1986 Census recognizes 25 CMAs (Figure 9) and 114 CAs (Figure 10).

Once a CA attains an urbanized core population of 100,000, it becomes a CMA, and continues to be one even if its population subsequently declines below 100,000. If, however, a CA drops below 10,000 population in its urbanized core, it is dropped from the CA program.

The 1986 CMAs and CAs were delineated using data derived from the place of work and place of residence questions in the 1981 Census. For a census subdivision (CSD) to be included in a CMA, at least one of the following criteria must be satisfied:

- the CSD falls completely or partly inside the urbanized core;
- at least 50% of the employed labour force living in the CSD works in the urbanized core;
- at least 25% of the employed labour force working in the CSD lives in the urbanized core.

In some parts of Canada, adjacent CMAs and CAs are socially and economically integrated. When this occurs, they are grouped to form a single consolidated CMA or CA. Regular CMAs and CAs, on the other hand, are independent. To be eligible for consolidation, the total commuting interchange between CMAs and CAs must be equal to at least 35% of the labour force living in the smaller CMA or CA. If consolidation takes place, the original CMAs or CAs become subregions (called primary CMAs or CAs) within the consolidated CMA or CA.

Figure 11 lists all consolidated CMAs and CAs with their constituent Primary CMAs and Primary CAs.

8. Primary Census Metropolitan Area (PCMA) and Primary Census Agglomeration (PCA)

A PCMA or a PCA is a labour market subregion within a larger consolidated CMA or CA. All PCMAs or PCAs, like regular CMAs and CAs, contain one or more census subdivisions.

9. CMA/CA Parts

CMA/CA parts are the rural and urban areas within a census metropolitan area or a census agglomeration. There are three CMA/CA parts:

(a) urbanized core: a large urban area around which a CMA or CA is delineated;
(b) urban fringe: an urban area within a CMA or CA, but outside of the urbanized core;
(c) rural fringe: all territory within a CMA or CA lying outside of urban areas.

Every CMA, CA, PCMA, PCA has an urbanized core, but may or may not have urban or rural fringe areas. The total urbanized core of a consolidated CMA or CA is the sum of the constituent cores. Similarly, the totals for urban and rural fringes of a consolidated CMA or CA are the sums of the constituent fringes.

10. Census Tract (CT)

A CT is a permanent small census geostatistical area established in a large urban community with the assistance of local specialists who help define boundaries that are useful for urban and social research. Populations of CTs vary between 2,500 and 8,000, with an average of about 4,000. For the 1986 Census, 37 CMA/CAs have census tracts.

All census metropolitan areas and census agglomerations containing a CSD with a population of 50,000 or more, at the previous census, are eligible for a census tract program. Once an urban centre is added to the program, it is retained even if its population subsequently declines.

11. Provincial Census Tract (PCT)

Provincial census tracts are permanent small rural or urban census geostatistical areas. They exist in areas not covered by the census tract program. Populations of PCTs vary between 3,000 and 8,000, with an average of about 5,000. As much as possible, their limits follow permanent physical features or geographic boundaries suggested by authorities from the provinces and territories.

12. Urban Area/Rural Area

An urban area is a continuously built-up area with a population of 1,000 or more and a population density of at least 400 per square kilometre based on the previous census. To be considered continuous, the built-up area must not have a discontinuity exceeding two kilometres. Rural areas are all territory lying outside of urban areas.

APPENDIX D

DETAILED TABLES ON

SMALL AREA DATA QUALITY

TABLE 1 . LISTING OF SELECTED (1) SMALL CSDS (WITH BASE POPULATION < 250), SHOWING EXTREME MIGRATION RATES, 1986 CENSUS.

PART A - CSDS WITH HIGHEST IN-MIGRATION RATES

CSD CODE	CSD NAME	BASE POPULATION AGE 5 + (ROUNDED)	MIGRATION RATES IN	OUT	NET
1102018	QUEENS, ROYALTY	*	100.0	4600.0	-4500.0
2449920	BERTHIER, PARTIE LAC-MATAWIN	*	100.0	0.0	100.0
2483919	TEMISCAMINGUE, PARTIE RAPIDE-DES-CEDRES	*	100.0	127.3	-27.3
2493940	LAC-SAINT-JEAN-EST, PARTIE BELLE-RIVIERE	*	100.0	14300.0	-14200.0
2494955	CHICOUTIMI, PARTIE MONT-VALIN	*	100.0	0.0	100.0
2498220	MISTASSINI	*	100.0	29000.0	-28900.0
2498830	NEMISCAU	*	100.0	66.7	33.3
3549079	NAISCOUTAING 17A	*	100.0	0.0	100.0
4703098	SPRING VALLEY	*	100.0	155.0	-55.0
4704022	ROBSART	*	100.0	106.5	-6.5
4704056	CARMICHAEL	*	100.0	0.0	100.0
4705050	WEST END	*	100.0	131.3	-31.3
4706044	SANDY BEACH	*	100.0	0.0	100.0
4706060	WEE TOO BEACH	*	100.0	40.0	60.0
4706069	GRANDVIEW BEACH	*	100.0	0.0	100.0
4706076	SUNSET COVE	*	100.0	0.0	100.0
4713034	KELFIELD	*	100.0	411.1	-311.1
4716043	PEBBLE BAYE	*	100.0	0.0	100.0
4717808	MAKWA LAKE 129	*	100.0	16.7	83.3
4807027	WHITE SANDS	*	100.0	0.0	100.0
4811022	ITASKA BEACH	*	100.0	40.0	60.0
4811042	LAKEVIEW	*	100.0	115.0	-15.0
4813003	NAKAMUN PARK	*	100.0	0.0	100.0
4813033	LARKSPUR	*	100.0	0.0	100.0
5919810	LYACKSUN 3	*	100.0	0.0	100.0
5925802	PENTLEDGE 2	*	100.0	100.0	0.0
5933828	BASQUE 18	*	100.0	0.0	100.0
5941804	CANOE CREEK 3	*	100.0	0.0	100.0
5941822	ANAHIM'S MEADOW 2	*	100.0	0.0	100.0
5951824	SKINS LAKE 16B	*	100.0	0.0	100.0
5951825	TATLA 1	*	100.0	50.0	50.0
6001046	SWIFT RIVER	*	100.0	540.0	-440.0
6105033	KEEWATIN, UNORGANIZED	*	100.0	192.3	-92.3
6108098	KITIKMEOT, UNORGANIZED	40	100.0	43.9	56.1
1306007	ALMA	*	91.7	150.0	-58.3
4706054	DISLEY	30	90.9	39.4	51.5
2497959	SAGUENAY, PARTIE RIVIERE-AUX-OUTARDES	*	88.2	0.0	88.2
4813045	MEWATHA BEACH	*	86.1	0.0	86.1
4707046	KEELER	*	85.7	128.6	-42.9
4816821	GREGOIRE LAKE	*	85.7	0.0	85.7
6001035	MARSH LAKE 5	*	85.0	0.0	85.0
4705807	SHESHEEP 74A	*	81.3	0.0	81.3
4623027	FOX LAKE NO. 2	130	81.2	0.0	81.2
4704031	ADMIRAL	50	80.4	45.1	35.3
5951835	ISAAC 8	*	80.0	0.0	80.0
4808005	JARVIS BAY	50	79.6	0.0	79.6
4701067	HEWARD	*	76.5	182.4	-105.9
4812013	PELICAN NARROWS	40	76.2	0.0	76.2
4706075	KANNATA VALLEY	45	75.6	0.0	75.6
4808025	HALF MOON BAY	75	75.3	54.8	20.5
2480908	PONTIAC, PARTIE LAC-PYTHONGA	*	75.0	1700.0	-1625.0
2490909	LAC-SAINT-JEAN-OUEST, PARTIE LAC-ASHUAPMUSHUAN	*	75.0	525.0	-450.0
4706043	KATEPWA BEACH	85	75.0	0.0	75.0

(1) : Excludes CSDS with zero population count in 1986

* : Indicates either suppression of population count to protect confidentiality or else incompletely enumerated Indian reserve and Indian settlements.

TABLE 1 . CONTINUED

PART B - CSDS WITH HIGHEST OUT-MIGRATION RATES

CSD CODE	CSD NAME	BASE POPULATION AGE 5 + (ROUNDED)	MIGRATION RATES IN	OUT	NET
2498220	MISTASSINI	*	100.0	29000.0	-28900.0
2493940	LAC-SAINT-JEAN-EST, PARTIE BELLE-RIVIERE	*	100.0	14300.0	-14200.0
1102018	QUEENS, ROYALTY	*	100.0	4600.0	-4500.0
2417909	MONTMORENCY NO.1, PARTIE LAC-JACQUES-CARTIER	*	22.2	3477.8	-3455.6
1005016	DIVISION NO.5, SUBD. C	*	20.8	2404.2	-2383.3
2404909	BONAVENTURE, PARTIE RIVIERE-BONAVENTURE	55	0.0	2063.6	-2063.6
2480908	PONTIAC, PARTIE LAC-PYTHONGA	*	75.0	1700.0	-1625.0
5913802	WHONNOCK 1	*	0.0	1657.1	-1657.1
2484750	SAINT-LAMBERT	250	20.2	983.9	-963.7
5915802	TSAWWASSEN	165	9.1	778.0	-768.9
2476909	LABELLE, PARTIE LAC-FERIOL	120	61.5	672.6	-611.1
2449340	SAINT-VIATEUR	235	17.1	597.4	-580.3
4709021	JEDBURGH	*	0.0	550.0	-550.0
6001046	SWIFT RIVER	*	100.0	540.0	-440.0
6107063	INUVIK, UNORGANIZED	*	66.7	533.3	-466.7
2490909	LAC-SAINT-JEAN-OUEST, PARTIE LAC-ASHUAPMUSHUAN	*	75.0	525.0	-450.0
1002009	DIVISION NO. 2, SUBD. G	*	0.0	485.7	-485.7
5921806	QUALICUM	45	7.0	446.5	-439.5
4713034	KELFIELD	*	100.0	411.1	-311.1
1205006	BEAR RIVER 6B	*	22.2	388.9	-366.7
5921805	NANOOSE	65	17.9	358.2	-340.3
1313020	ST. BASILE 10	55	0.0	351.9	-351.9
4717004	METINOTA	*	0.0	290.0	-290.0
3554057	MATACHEWAN 72	*	25.0	266.7	-241.7
2465520	ILE-DORVAL	*	0.0	250.0	-250.0
1206011	GOLD RIVER 21	*	28.6	242.9	-214.3
4709008	STORNOWAY	*	50.0	236.4	-186.4
4811038	SEBA BEACH	120	13.3	230.0	-216.7
4708036	SUCCESS	35	55.6	227.8	-172.2
1006008	DIVISION NO. 6, SUBD. E	135	0.0	214.7	-214.7
4704008	BRACKEN	*	13.2	210.5	-197.4
2403919	GASPE-OUEST, PARTIE MONT-ALBERT	210	0.0	202.9	-202.9
4813061	WHISPERING HILLS	*	0.0	200.0	-200.0
2463270	NEW GLASGOW	145	18.6	195.9	-177.2
6105033	KEEWATIN, UNORGANIZED	*	100.0	192.5	-92.5
4704051	PIAPOT	75	0.0	186.7	-186.7
4701067	HEWARD	*	76.5	182.4	-105.9
4701028	BENSON	85	40.2	181.6	-141.4
2427110	SAINTE-ANNE-DU-LAC	50	0.0	173.5	-173.5
2411900	CHARLEVOIX-EST, PARTIE MONT-ELIE	55	0.0	167.9	-167.9
3554091	TIMISKAMING, UNORGANIZED, EAST PART	*	12.5	156.3	-143.8
2414790	SAINT-ANTOINE-DE-L'ISLE-AUX-GRUES	195	12.6	156.0	-143.5
4703098	SPRING VALLEY	*	100.0	155.0	-55.0
4709004	WROXTON	40	0.0	154.8	-154.8
1306007	ALMA	*	91.7	150.0	-58.3
6106041	TUNGSTEN	205	56.1	148.8	-92.7
4813039	RADWAY	95	36.2	146.8	-110.6
5941809	QUESNEL 1	*	3.8	142.3	-138.5
1203009	BEAR RIVER (PART) 6	40	19.5	141.5	-122.0
2432959	CHAMPLAIN, PARTIE RIVIERE-WINDIGO	150	24.0	140.7	-116.7
4702036	GOODWATER	40	0.0	139.5	-139.5
4717019	WASECA	90	37.0	135.9	-98.9
4713033	RUTHILDA	*	0.0	135.1	-135.1

(1) : Excludes CSDS with zero population count in 1986

* : Indicates either suppression of population count to protect confidentiality or else incompletely enumerated Indian reserve and Indian settlements.

TABLE 1 . CONTINUED

PART C - CSDS WITH HIGHEST NET-MIGRATION RATES

CSD CODE	CSD NAME	BASE POPULATION AGE 5 + (ROUNDED)	MIGRATION RATES IN	OUT	NET
2498220	MISTASSINI	*	100.0	29000.0	-28900.0
2493940	LAC-SAINT-JEAN-EST, PARTIE BELLE-RIVIERE	*	100.0	14300.0	-14200.0
1102018	QUEENS, ROYALTY	*	100.0	4600.0	-4500.0
2417909	MONTMORENCY NO.1, PARTIE LAC-JACQUES-CARTIER	*	22.2	3477.8	-3455.6
1005016	DIVISION NO.5, SUBD. C	*	20.8	2404.2	-2383.3
2404909	BONAVENTURE, PARTIE RIVIERE-BONAVENTURE	55	0.0	2063.6	-2063.6
5913802	WHONNOCK 1	*	0.0	1657.1	-1657.1
2480908	PONTIAC, PARTIE LAC-PYTHONGA	*	75.0	1700.0	-1625.0
2484750	SAINT-LAMBERT	250	20.2	983.9	-963.7
5915802	TSAWWASSEN	165	9.1	778.0	-768.9
2476909	LABELLE, PARTIE LAC-FERIOL	120	61.5	672.6	-611.1
2449340	SAINT-VIATEUR	235	17.1	597.4	-580.3
4709021	JEDBURGH	*	0.0	550.0	-550.0
1002009	DIVISION NO. 2, SUBD. G	*	0.0	485.7	-485.7
6107063	INUVIK, UNORGANIZED	*	66.7	533.3	-466.7
2490909	LAC-SAINT-JEAN-OUEST, PARTIE LAC-ASHUAPMUSHUAN	*	75.0	525.0	-450.0
6001046	SWIFT RIVER	*	100.0	540.0	-440.0
5921806	QUALICUM	45	7.0	446.5	-439.5
1205006	BEAR RIVER 6B	*	22.2	388.9	-366.7
1313020	ST. BASILE 10	55	0.0	351.9	-351.9
5921805	NANOOSE	65	17.9	358.2	-340.3
4713034	KELFIELD	*	100.0	411.1	-311.1
4717004	METINOTA	*	0.0	290.0	-290.0
2465520	ILE-DORVAL	*	0.0	250.0	-250.0
3554057	MATACHEWAN 72	*	25.0	266.7	-241.7
4811038	SEBA BEACH	120	13.3	230.0	-216.7
1006008	DIVISION NO. 6, SUBD. E	135	0.0	214.7	-214.7
1206011	GOLD RIVER 21	*	28.6	242.9	-214.3
2403919	GASPE-OUEST, PARTIE MONT-ALBERT	210	0.0	202.9	-202.9
4813061	WHISPERING HILLS	*	0.0	200.0	-200.0
4704008	BRACKEN	*	13.2	210.5	-197.4
4704051	PIAPOT	75	0.0	186.7	-186.7
4709008	STORNOWAY	*	50.0	236.4	-186.4
2463270	NEW GLASGOW	145	18.6	195.9	-177.2
2427110	SAINTE-ANNE-DU-LAC	50	0.0	173.5	-173.5
4708036	SUCCESS	35	55.6	227.8	-172.2
2411900	CHARLEVOIX-EST, PARTIE MONT-ELIE	55	0.0	167.9	-167.9
4709004	WROXTON	40	0.0	154.8	-154.8
3554091	TIMISKAMING, UNORGANIZED, EAST PART	*	12.5	156.3	-143.8
2414790	SAINT-ANTOINE-DE-L'ISLE-AUX-GRUES	195	12.6	156.0	-143.5
4701028	BENSON	85	40.2	181.6	-141.4
4702036	GOODWATER	40	0.0	139.5	-139.5
5941809	QUESNEL 1	*	3.8	142.3	-138.5
4713033	RUTHILDA	*	0.0	135.1	-135.1
4703031	VICEROY	75	0.0	126.7	-126.7
6001019	KLOO LAKE	*	0.0	125.0	-125.0
1203009	BEAR RIVER (PART) 6	40	19.5	141.5	-122.0
4709018	WILLOWBROOK	45	0.0	121.4	-121.4
4706062	FINDLATER	60	4.9	123.0	-118.0
2432959	CHAMPLAIN, PARTIE RIVIERE-WINDIGO	150	24.0	140.7	-116.7
3556098	COCHRANE, UNORGANIZED, SOUTH EAST PART	*	0.0	114.7	-114.7
4813039	RADWAY	95	36.2	146.8	-110.6
1009047	DIVISION NO. 9, SUBD. G	90	0.0	108.7	-108.7

(1) : Excludes CSDS with zero population count in 1986

* : Indicates either suppression of population count to protect confidentiality or else incompletely enumerated Indian reserve and Indian settlements.

Source : Adapted from unpublished report "Evaluation of Mobility Data from the 1986 Census" by J.A. Norland, Demography Division, Statistics Canada, February 1989.

TABLE 2 CSDS (WITH BASE POPULATION 250+), BY MIGRATION RATE AND POPULATION SIZE, CANADA, 1986 CENSUS

PART A IN-MIGRATION

MIGRATION RATES	BASE POPULATION 250-999	1,000-4,999	5,000-9,999	10,000 +	TOTAL
ZERO	13	0	0	0	13
LESS THAN 5%	221	40	3	1	265
LESS THAN 10%	499	296	23	21	839
LESS THAN 15%	494	376	62	71	1003
LESS THAN 20%	366	379	76	82	903
LESS THAN 25%	252	297	65	75	689
LESS THAN 30%	144	177	39	43	403
LESS THAN 40%	131	94	20	21	266
LESS THAN 50%	29	18	6	2	55
50% AND OVER	14	6	0	0	20
TOTAL	2163	1683	294	316	4456

PART B OUT-MIGRATION

MIGRATION RATES	BASE POPULATION 250-999	1,000-4,999	5,000-9,999	10,000 +	TOTAL
ZERO	141	22	3	0	166
LESS THAN 5%	366	207	26	15	614
LESS THAN 10%	336	342	53	34	765
LESS THAN 15%	326	301	54	67	748
LESS THAN 20%	232	217	54	92	595
LESS THAN 25%	172	164	39	69	444
LESS THAN 30%	151	132	18	19	320
LESS THAN 40%	170	154	25	13	362
LESS THAN 50%	99	66	13	4	182
50% AND OVER	170	78	9	3	260
TOTAL	2163	1683	294	316	4456

PART C NET-MIGRATION

MIGRATION RATES	BASE POPULATION 250-999	1,000-4,999	5,000-9,999	10,000 +	TOTAL
LESS THAN -100%	19	9	0	0	28
LESS THAN -50%	44	14	3	0	61
LESS THAN -40%	29	13	0	0	42
LESS THAN -30%	74	30	3	1	108
LESS THAN -20%	150	67	10	4	231
LESS THAN -15%	104	80	14	4	202
LESS THAN -10%	161	123	10	11	305
LESS THAN -5%	236	177	35	35	483
LESS THAN 0%	318	273	36	83	710
ZERO	23	2	0	0	25
LESS THAN 5%	353	333	64	76	826
LESS THAN 10%	292	263	56	49	660
LESS THAN 15%	177	165	38	30	410
LESS THAN 20%	94	74	17	16	201
LESS THAN 30%	64	51	6	7	128
LESS THAN 40%	14	5	2	0	21
LESS THAN 50%	6	3	0	0	9
LESS THAN 100%	5	1	0	0	6
TOTAL	2163	1683	294	316	4456

Source : Adapted from unpublished report "Evaluation of Mobility data from 1986 Census" by J.A. Worland, Demography Division, Statistics Canada, February 1989.

TABLE 3 - LISTING OF SELECTED 'DEVIANT CSDS' WITH BASE POPULATION 250+ AND 'SUSPECT' OUT-MIGRATION RATES 1986 Census
(HIGHEST AND LOWEST)
PART A - HIGHEST

OBS	SGC *	CSDNAME	POP5+ (rounded)	Migration Rates INRATE	OUTRATE	NETRATE
1	2429580	SAINT-LEONARD-DE-PORTNEUF	905	7.3	570.4	-563.1
2	6001004	FARO	355	62.6	521.2	-458.6
3	2424410	SAINT-SEBASTIEN	710	2.9	487.5	-484.6
4	2498450	SCHEFFERVILLE	280	30.6	449.5	-418.9
5	2408210	SAINT-HUBERT	1390	9.7	430.9	-421.2
6	3541066	LINDSAY	305	32.2	377.0	-344.7
7	2494120	L'ANSE-SAINT-JEAN	1220	2.6	255.5	-252.9
8	5951032	GRANISLE	645	27.3	207.1	-179.8
9	1010020	DIVISION NO. 10, SUBD. C	580	4.0	206.4	-202.4
10	4718090	DIVISION NO. 18, UNORGANIZED	1485	22.2	203.4	-181.2
11	2425110	CHARTIERVILLE	305	26.2	197.7	-171.5
12	4603058	THOMPSON	1175	12.5	189.7	-177.2
13	5941005	ONE HUNDRED MILE HOUSE	1485	25.2	185.3	-160.1
14	2433540	SAINT-LEONARD	1020	14.4	173.5	-159.0
15	2427380	SAINTE-SOPHIE	255	3.5	167.5	-163.9
16	2427630	SAINTE-JULIE	700	13.8	160.3	-146.6
17	2484340	SAINT-LAURENT	425	7.1	158.0	-150.9
18	5955049	PEACE RIVER-LIARD, SUBD. A	910	18.3	140.8	-122.5
19	3560049	PICKLE LAKE	430	38.5	139.9	-101.4
20	3502042	CAMBRIDGE	4545	26.9	138.7	-111.9
21	3510042	BARRIE	690	40.4	132.6	-92.2
22	2451320	SAINT-CHARLES-SUR-RICHELIEU	315	11.1	131.5	-120.4
23	2497470	SAINT-PAUL-DU-NORD	830	11.7	130.9	-119.1
24	2484670	SAINT-JANVIER	385	24.9	130.3	-105.4
25	5919012	DUNCAN	3600	23.2	129.1	-105.9
26	5943035	MOUNT WADDINGTON, SUBD. A	1030	29.1	125.9	-96.9
27	3538009	EUPHEMIA	925	13.7	123.4	-109.7
28	5949032	STEWART	760	31.2	122.6	-91.4
29	5929011	SECHELT	1155	24.8	119.2	-94.4
30	4813014	ONONAY	580	29.8	118.4	-88.6
31	5919031	COWICHAN VALLEY, SUBD. A	2590	15.2	116.3	-101.1
32	4811014	NEW SAREPTA	320	30.9	115.3	-84.4
33	1304005	GAGETOWN	520	20.2	115.3	-95.2
34	4809010	CAROLINE	300	41.9	114.5	-72.6
35	2411420	SAINTE-AGNES	600	12.3	112.6	-100.3
36	1001490	DIVISION NO. 1, SUBD. R	445	4.7	110.3	-105.6
37	3514019	HAMILTON	7040	24.3	107.4	-83.2
38	5933015	LYTTON	325	31.8	104.7	-72.9
39	2417460	SAINTE-BRIGITTE-DE-LAVAL	2020	18.5	103.8	-85.3
40	3557095	ALGOMA,UNORGANIZED, NORTH PART	6450	20.8	102.5	-81.7
41	5949022	HAZELTON	395	25.9	101.0	-75.1
42	5951009	FRASER LAKE	1060	22.0	100.6	-78.6
43	2484969	ABITIBI, PARTIE LAC-CHICOBI	250	2.0	100.0	-98.0
44	5937005	LUMBY	1040	41.2	99.2	-58.1
45	2404650	MATAPEDIA	710	12.3	97.3	-85.9
46	5925039	SAYWARD	350	44.4	97.1	-52.7
47	4717058	LOON LAKE	305	27.6	97.1	-69.5
48	4811024	HARBURG	400	42.0	96.0	-54.0
49	2493440	SAINT-BRUNO	2295	12.0	94.7	-82.7
50	1003031	DIVISION NO. 3, SUBD. H	970	3.1	94.6	-91.6
51	4814004	WILDWOOD	355	9.5	94.1	-84.6
52	3516004	OMEMEE	805	22.6	94.1	-71.4
53	4806029	BEISEKER	465	38.0	94.0	-56.1

*1986 Standard Geographical Classification

TABLE 3 - CONTINUED
PART B - LOWEST

OBS	SGC *	CSDNAME	POP5+ (rounded)	Migration Rates INRATE	OUTRATE	NETRATE
1	5949801	DOLPHIN ISLAND 1	375	11.6	0	11.6
2	5949816	GITMANGAK 1IE	340	5.3	0	5.3
3	5949825	LACHKALTSAP 9	370	15.3	0	15.3
4	5951803	NECOSLIE 1	320	6.8	0	6.8
5	5955036	PEACE RIVER-LIARD, SUBD. B	8015	15.0	0	15.0

*1986 Standard Geographical Classification

Note: This table shows the first and last pages of a printout of 'Deviant' CSDs with regard to out-migration rates.

Source: Adapted from unpublished report "Evaluation of Mobility Data from the 1986 Census" by J.A. Norland, Demography Division, Statistics Canada, February 1989.

TABLE 4 - LISTING OF SELECTED 'DEVIANT CSDS' WITH BASE POPULATION 5000+ AND 'SUSPECT' OUT-MIGRATION RATES 1986, Census

OBS	SGC	CSDNAME	POP5+ (rounded)	Migration Rates INRATE	OUTRATE	NETRATE
1	3514019	HAMILTON	7040	24.3	107.4	-83.2
2	3557095	ALGOMA, UNORGANIZED, NORTH PART	6450	20.8	102.5	-81.7
3	3539034	LONDON	5435	20.2	72.2	-52.0
4	5955034	FORT ST. JOHN	11880	25.4	58.4	-33.0
5	5925005	COMOX	6245	36.4	55.5	-19.0
6	3547078	PETAWAWA	7119	45.2	54.9	-9.7
7	5911012	ABBOTSFORD	13070	27.7	52.1	-24.4
8	4815032	IMPROVEMENT DISTRICT NO. 9	5810	47.3	52.1	-4.8
9	5903015	NELSON	7405	19.5	52.1	-32.5
10	5917034	VICTORIA	60540	23.1	51.7	-28.6
11	5941013	QUESNEL	7465	15.2	50.9	-35.7
12	5955014	DAWSON CREEK	9470	25.7	50.2	-24.5
13	3512012	TRENTON	14075	24.3	49.7	-25.4
14	1010032	LABRADOR CITY	7970	9.1	48.5	-39.4
15	1303012	OROMOCTO	8360	46.8	48.0	-1.2
16	5941009	WILLIAMS LAKE	9215	23.6	47.7	-24.2
17	2433320	BECANCOUR	9635	17.5	46.8	-29.3
18	4819038	PEACE RIVER	5530	34.6	46.6	-12.0
19	3543021	ESSA	12125	45.5	45.4	0.1
20	5925010	COURTENAY	8845	28.9	44.6	-15.7
21	5949011	TERRACE	9550	22.6	42.9	-20.3
22	4808031	LACOMBE	5420	26.6	41.9	-15.3
23	4805029	DRUMHELLER	5300	23.0	41.2	-18.3
24	4811048	STONY PLAIN	5095	34.7	41.0	-6.3
25	4814024	EDSON	6525	34.2	41.0	-6.8
26	5903045	CASTLEGAR	5870	15.9	41.0	-25.0
27	4813030	WHITECOURT	5030	37.0	40.5	-3.5
28	4811016	LEDUC	11785	30.6	40.2	-9.6
29	5937014	VERNON	18350	22.8	40.1	-17.3
30	1202001	ARGYLE	8430	4.5	4.8	-0.4
31	1210001	COLCHESTER, SUBD. C	10635	13.7	4.8	8.9
32	3530010	CAMBRIDGE	72985	12.9	4.8	8.1
33	5907020	OKANAGAN-SIMILKAMEEN, SUBD. B	8410	21.7	4.8	17.0
34	5955019	PEACE RIVER-LIARD, SUBD. C	7825	17.7	4.7	13.0
35	4811012	LEDUC COUNTY NO. 25	12200	18.4	4.7	13.8
36	1214001	ANTIGONISH, SUBD. A	6060	11.1	4.6	6.5
37	4809002	CLEARWATER NO. 99	8975	18.2	4.6	13.6
38	3510006	PITTSBURGH	8500	40.8	4.4	36.4
39	2465380	HAMPSTEAD	7120	7.5	4.4	3.1
40	5921028	NANAIMO, SUBD. B	11610	27.4	4.3	23.1
41	5917040	ESQUIMALT	14685	29.4	4.3	25.1
42	1203001	CLARE	9125	5.5	4.2	1.3
43	4810016	BEAVER COUNTY NO. 9	5020	17.2	4.1	13.1
44	3519028	VAUGHAN	58295	31.5	4.0	27.5
45	2436200	ASCOT	8015	29.8	4.0	25.8
46	1202006	YARMOUTH	6870	15.8	3.8	12.0
47	5935013	CENTRAL OKANAGAN, SUBD. A	7820	24.7	3.8	20.8
48	3537004	MERSEA	8260	14.5	3.8	10.7
49	3520006	EAST YORK	94330	10.3	3.7	6.6
50	4808001	RED DEER COUNTY NO. 23	12550	22.4	3.7	18.7
51	5951049	BULKLEY-NECHAKO, SUBD. B	5055	21.5	3.6	17.9
52	1315001	SAUMAREZ	7090	7.0	3.6	3.4
53	2463310	SAINT-ANTOINE	7110	23.9	3.5	20.4
54	5917005	NORTH SAANICH	6860	22.6	3.3	19.3

TABLE 4 - CONTINUED

OBS	SGC	CSDNAME	POP5+ (rounded)	Migration Rates INRATE	OUTRATE	NETRATE
55	2423310	SAINT-GEORGES-OUEST	5890	9.9	3.2	6.7
56	5917041	COLWOOD	10340	22.8	3.1	19.7
57	5941011	CARIBOO, SUBD. B	19405	22.0	2.5	19.4
58	2458280	SAINT-CHARLES-BORROMEE	7365	18.3	2.4	15.8
59	5917045	CAPITAL, SUBD. B	18445	18.2	2.4	15.8
60	5923031	ALBERNI-CLAYOQUOT, SUBD. A	6950	7.6	2.2	5.3
61	4813018	BARRHEAD COUNTY NO. 11	5270	13.8	2.2	11.6
62	5937010	COLDSTREAM	6295	22.0	2.1	19.9
63	5937019	NORTH OKANAGAN, SUBD. B	12415	18.1	1.9	16.2
64	4806028	MOUNTAIN VIEW COUNTY NO. 17	8165	17.0	1.9	15.1
65	5917021	SAANICH	77045	15.7	1.7	14.0
66	5917030	OAK BAY	16065	12.7	1.6	11.1
67	2437720	MAGOG	12360	14.5	1.2	13.2
68	2453780	SAINT-ATHANASE	5220	21.8	1.0	20.8
69	2434460	SAINTE-VICTOIRE-D'ARTHABASKA	5320	17.0	0.5	16.5
70	1003034	CHANNEL-PORT AUX BASQUES	5490	9.1	0.2	8.9
71	5919014	COMICHAN VALLEY, SUBD. B	8780	22.1	0.0	22.1
72	5919045	COMICHAN VALLEY, SUBD. C	7905	32.0	0.0	32.0
73	5955036	PEACE RIVER-LIARD, SUBD. B	8015	15.0	0.0	15.0

Source: Adapted from unpublished report "Evaluation of Mobility Data from the 1986 Census" by J.A. Norland, Demography Division, Statistics Canada, February 1989.

Table 5: Means and Standard Deviations, (SDs) of Migration Rates for all CSDs [1] and for Duplicate name CSDs [2], 1986 Census

Rates	CSDS	Mean	Standard Deviation
In-Migration	All CSDs (n=4456)	16.7	9.1
	Duplicate CSDs		
	15-character match (n=886)	15.1	8.4
	50-character match (n=480)	15.0	7.6
Out-Migration	All CSDs (n=4456)	19.8	25.6
	Duplicate CSDs		
	15-character match (n=866)	20.6	40.8
	50-character match (n=480)	23.4	44.9
Net-Migration[3]	All CSDs (n=4456)	12.0	22.0
	Duplicate CSDs		
	15-character match (n=866)	15.5	38.6
	50-character match (n=480)	17.4	42.2

(1): Data are based only on CSDs with base populations of 250+ (age 5+).

(2): Duplicate CSDs were identified by matching either the first 15 or the first 50 characters of the place name within province. Only exact character-for-character matches were considered to be Duplicate name CSDs.

(3): Means and SDs for net-migration rates refer to absolute values.

The data indicate that (i) the 15- and the 50-character matches render means and standard deviations that are relatively close; (ii) the means for all CSDs and for duplicate-name CSDs are fairly close, too; (iii) the one major difference to note concerns standard deviations of the out- and net-migration rates: the values for duplicate-name CSDs are considerably higher, reflecting the fact that extreme rates are accentuated among duplicate name CSDs (relative to all CSDs).

Source: Adapted from unpublished report "Evaluation of Mobility Data from the 1986 Census", by J.A. Norland, Demography Division, Statistics Canada, February, 1989.

TABLE 6 - LISTING OF SELECTED DUPLICATE NAME PLACES (DNP) BASED ON A 50 CHARACTER MATCH, SHOWING MIGRATION RATES, 1986 CENSUS

SGC	NAME	BASE POPULATION AGE 5 + (ROUNDED)	MIGRATION RATES (PERCENTAGES) IN	OUT	NET	
1203009	BEAR RIVER (PART) 6	40	19.5	141.5	-122.0	
1205002	BEAR RIVER (PART) 6	0	N/A	N/A	N/A	(1)
1306006	ALMA	285	14.4	7.4	7.0	
1306007	ALMA	0	91.7	150.0	-58.3	
1304006	GAGETOWN	280	10.1	26.3	-16.2	
1304005	GAGETOWN	520	20.2	115.3	-95.2	
1306004	HARVEY	410	11.0	3.4	7.6	
1310005	HARVEY	330	35.4	69.2	-33.8	
1311004	WOODSTOCK	1620	14.5	57.3	-42.8	
1311006	WOODSTOCK	4090	18.3	5.4	12.9	
2454360	BEDFORD	2505	21.3	6.3	15.0	
2454380	BEDFORD	705	6.4	63.5	-57.1	
2425380	COMPTON	695	18.5	51.2	-32.8	
2425390	COMPTON	1000	17.6	5.7	11.9	
2472230	DORION	5160	18.2	15.8	2.4	
2480430	DORION	510	37.9	88.9	-51.0	
2468120	HEMMINGFORD	660	17.3	53.3	-36.1	
2468180	HEMMINGFORD	1620	17.9	3.5	14.4	
2427440	INVERNESS	255	10.2	78.8	-68.6	
2427450	INVERNESS	565	4.2	1.2	3.0	
2484365	MACAMIC	1415	10.1	7.6	2.5	
2484370	MACAMIC	485	18.2	55.7	-37.5	
2437720	MAGOG	12360	14.5	1.2	13.2	
2437780	MAGOG	3370	22.6	60.7	-38.1	
2490275	MISTASSINI	6060	12.2	11.8	0.4	
2498220	MISTASSINI	*	100.0	29000.0	-28900.0	
2498820	MISTASSINI	1700	3.1	3.8	-0.7	
2498240	NEMISCAU	310	12.2	0.0	12.2	
2498830	NEMISCAU	*	100.0	66.7	33.3	
2435550	SAINT-GEORGES-DE-WINDSOR	215	6.5	60.3	-53.7	
2435580	SAINT-GEORGES-DE-WINDSOR	515	8.8	1.0	7.8	
2408210	SAINT-HUBERT	1390	9.7	430.9	-421.2	
2456400	SAINT-HUBERT	60360	24.0	11.5	12.5	

(1) : Rates not calculated due to zero population count.

* : Indicates either suppression of population count to protect confidentiality or else incompletely enumerated Indian reserve and Indian settlements.

TABLE 6 - CONTINUED

SGC	NAME	BASE POPULATION AGE 5 + (ROUNDED)	MIGRATION RATES (PERCENTAGES) IN	OUT	NET
2463740	SAINT-JOVITE	3380	13.6	4.4	9.2
2463760	SAINT-JOVITE	1090	24.3	58.5	-34.2
2456580	SAINT-LAMBERT	18930	22.0	9.6	12.4
2484750	SAINT-LAMBERT	250	20.2	983.9	-963.7
2465480	SAINT-LAURENT	63135	14.7	14.0	0.7
2484340	SAINT-LAURENT	425	7.1	158.0	-150.9
2433540	SAINT-LEONARD	1020	14.4	173.5	-159.0
2465220	SAINT-LEONARD	71590	13.6	6.2	7.4
2406560	SAINT-LUC	875	8.5	75.3	-66.8
2422270	SAINT-LUC	555	7.5	14.7	-7.2
2432200	SAINT-LUC	545	11.0	25.0	-14.1
2455750	SAINT-LUC	9800	30.3	11.1	19.2
2415750	SAINT-MICHEL	1500	11.4	75.6	-64.2
2467600	SAINT-MICHEL	1675	11.1	17.2	-6.2
2450320	SAINT-OURS	515	29.6	63.4	-33.9
2450360	SAINT-OURS	910	18.6	4.2	14.5
2471670	SAINT-POLYCARPE	470	7.9	52.1	-44.3
2471720	SAINT-POLYCARPE	915	18.7	5.6	13.1
2424410	SAINT-SEBASTIEN	710	2.9	487.5	-484.6
2453120	SAINT-SEBASTIEN	655	16.0	16.3	-0.3
2407740	SAINT-SIMON	520	8.8	58.0	-49.1
2440280	SAINT-SIMON	1155	17.0	12.8	4.2
2415690	SAINT-VALLIER	420	24.9	50.8	-25.9
2415720	SAINT-VALLIER	715	6.7	14.7	-8.0
2433380	SAINT-WENCESLAS	340	12.0	57.0	-45.0
2433400	SAINT-WENCESLAS	750	16.3	6.5	9.7
2428150	SAINTE-AGATHE	715	2.7	83.2	-80.5
2428180	SAINTE-AGATHE	515	4.9	16.3	-11.5
2463630	SAINTE-AGATHE	980	7.1	3.6	3.5
2427110	SAINTE-ANNE-DU-LAC	50	0.0	173.5	-173.5
2476700	SAINTE-ANNE-DU-LAC	505	15.3	14.9	0.4
2427630	SAINTE-JULIE	700	13.8	160.3	-146.6
2457280	SAINTE-JULIE	14170	24.8	13.2	11.6
2433600	SAINTE-MONIQUE	210	17.6	59.5	-41.9
2433620	SAINTE-MONIQUE	470	12.6	8.3	4.3
2493780	SAINTE-MONIQUE	815	7.4	18.7	-11.3

(1) : Rates not calculated due to zero population count.

* : Indicates either suppression of population count to protect confidentiality or else incompletely enumerated Indian reserve and Indian settlements.

TABLE 6 - CONTINUED

SGC	NAME	BASE POPULATION AGE 5 + (ROUNDED)	MIGRATION RATES (PERCENTAGES) IN	OUT	NET	
2427380	SAINTE-SOPHIE	255	3.5	167.5	-163.9	
2463280	SAINTE-SOPHIE	5680	25.7	8.6	17.0	
2498450	SCHEFFERVILLE	280	30.6	449.5	-418.9	
2498570	SCHEFFERVILLE	0	N/A	N/A	N/A	(1)
3510042	BARRIE	690	40.4	132.6	-92.2	
3543042	BARRIE	44440	25.1	18.6	6.4	
3502042	CAMBRIDGE	4545	26.9	138.7	-111.9	
3530010	CAMBRIDGE	72985	12.9	4.8	8.1	
3542042	COLLINGWOOD	2635	18.0	50.7	-32.7	
3543031	COLLINGWOOD	11005	21.5	12.1	9.4	
3540024	GODERICH	2155	18.3	55.6	-37.4	
3540028	GODERICH	6700	19.6	7.1	12.4	
3523006	GUELPH	2800	16.7	93.1	-76.4	
3523008	GUELPH	71200	19.6	14.9	4.7	
3514019	HAMILTON	7040	24.3	107.4	-83.2	
3525018	HAMILTON	283345	10.5	10.9	-0.4	
3509034	LANARK	1135	29.5	9.9	19.6	
3509036	LANARK	800	11.6	55.7	-44.1	
3516009	LINDSAY	13105	24.1	16.4	7.7	
3541066	LINDSAY	305	32.2	377.0	-344.7	
3539034	LONDON	5435	20.2	72.2	-52.0	
3539036	LONDON	247185	17.2	15.5	1.7	
3547062	PEMBROKE	1350	13.3	50.1	-36.8	
3547064	PEMBROKE	12835	16.2	20.5	-4.3	
3547078	PETAWAWA	7120	45.2	54.9	-9.7	
3547079	PETAWAWA	4840	34.3	31.8	2.5	
3557024	THESSALON	520	23.9	51.0	-27.1	
3557028	THESSALON	1345	7.1	5.7	1.4	
4623022	GILLAM	1670	51.6	7.8	43.9	
4623025	GILLAM	0	N/A	N/A	N/A	(1)
4603058	THOMPSON	1175	12.5	189.7	-177.2	
4622026	THOMPSON	13110	25.2	16.0	9.2	

(1) : Rates not calculated due to zero population count.

* : Indicates either suppression of population count to protect confidentiality or else incompletely enumerated Indian reserve and Indian settlements.

Source : Adapted from unpublished report "Evaluation of Mobility data from 1986 Census" by J.A. Norland, Demography Division, Statistics Canada, February 1989.

Table 7: Migration Rates for CSDs in CMAs: Example of Saanich in Victoria, 1986 Census

	Victoria CSD		Saanich CSD	
	Number	Rates	Number	Rates
1986 Pop. 5+	60,540	-	77,045	-
1981 Pop. 5+	59,490	-	73,360	-
1981-86 Change	+1,050	1.8%*	+3,685	4.9%*
Net-migration				
1986 Census	-17,310	-28.5%	+10,770	+14.0%
1981 Census	-18,160	-30.5%	+11,635	+15.9%
Out-migration				
1986 Census	31,295	51.7%	1,305	1.7%
1981 Census	33,390	56.1%	2,075	2.8%

*Calculated as 100 x (Pop. 86 - Pop. 81)/0.5 x (Pop. 86 + Pop. 81)

The 1981-86 change in the base population of the CSD of Victoria, +1,050 persons, is inconsistent with a net-migration loss of 17,310 over the same period; by the same token, the 1981-86 change in the base population of Saanich, +3,685 persons, is inconsistent with a net-migration gain of 10,770. It is more than mere speculation to assume that these data are caused by persons who had actually left Saanich but reported Victoria as "place of residence 5 years ago".

Source: Adapted from unpublished report "Evaluation of Mobility Data from the 1986 Census", by J.A. Norland, Demography Division, Statistics Canada, February, 1989.

TABLE 8 - LISTING OF SELECTED "DEVIANT" CDS, SHOWING MIGRATION RATES, 1986 CENSUS

CD CODE	CD NAME	BASE POPULATION AGE 5 + (ROUNDED)	MIGRATION RATES (PERCENTAGES) IN	OUT	NET
1010	DIVISION NO. 10, NFLD	25935	10.6	29.4	-18.8
1303	SUNBURY CO., N.B.	20510	28.0	22.9	5.0
2429	PORTNEUF CO., QUE	55285	12.0	26.5	-14.5
2433	NICOLET CO., QUE	30750	12.7	27.9	-15.2
2498	TERRITOIRE-DU-NOUVEAU-QUEBEC, QUE	32785	12.1	31.5	-19.4
3519	YORK REGIONAL MUNICIPALITY, ONT	316560	25.1	9.9	15.1
4623	DIVISION NO. 23, MAN	8950	22.8	34.7	-11.9
4718	DIVISION NO. 18, SASK	21615	10.4	25.5	-15.1
4812	DIVISION NO. 12, ALTA	38780	26.5	21.4	5.1
4814	DIVISION NO. 14, ALTA	22760	22.8	28.2	-5.4
4815	DIVISION NO. 15, ALTA	21025	30.7	31.9	-1.2
4816	DIVISION NO. 16, ALTA	43500	25.7	24.1	1.6
4818	DIVISION NO. 18, ALTA	12040	22.8	40.1	-17.3
5911	CENTRAL FRASER, B.C.	123165	25.6	15.4	10.2
5931	SQUAMISH-LILLOOET, B.C.	16215	21.6	25.7	-4.1
5943	MOUNT WADDINGTON, B.C.	13350	24.7	39.4	-14.7
5947	SKEENA-QUEEN CHARLOTTE, B.C.	20700	20.5	31.0	-10.5
5951	BULKLEY-NECHAKO, B.C.	33370	15.9	25.9	-10.0
5955	PEACE RIVER-LIARD, B.C.	51080	21.6	27.9	-6.3
5957	STIKINE, B.C.	1815	29.3	58.8	-29.5
6001	YUKON	21050	21.9	34.6	-12.7
6106	FORT SMITH DISTRICT, N.W.T.	22340	28.7	30.1	-1.4
6107	INUVIK DISTRICT, N.W.T.	7300	28.6	33.7	-5.1

Source : Adapted from unpublished report "Evaluation of Mobility Data from 1986 Census" by J.A. Norland, Demography Division, Statistics Canada, February 1989.

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